



LIBRARY OF THE  
UNIVERSITY OF ILLINOIS  
AT URBANA-CHAMPAIGN

590.5

FI

v. 17

cop. 2



**CENTRAL CIRCULATION BOOKSTACKS**

The person charging this material is responsible for its renewal or its return to the library from which it was borrowed on or before the **Latest Date** stamped below. **You may be charged a minimum fee of \$75.00 for each lost book.**

Theft, mutilation, and underlining of books are reasons for disciplinary action and may result in dismissal from the University.

**TO RENEW CALL TELEPHONE CENTER, 333-8400**

**UNIVERSITY OF ILLINOIS LIBRARY AT URBANA-CHAMPAIGN**

BUILDING USE ONLY

MAR 16 1997

MAR 16 1997

FEB 25 2000

FEB 16 2000

When renewing by phone, write new due date below previous due date.

L162







2.5  
3  
2

FIELD MUSEUM OF NATURAL HISTORY

FOUNDED BY MARSHALL FIELD, 1893

PUBLICATION 263

ZOOLOGICAL SERIES

VOL. XVII, No. 3

---

BIRDS OF THE  
JAMES SIMPSON-ROOSEVELTS  
ASIATIC EXPEDITION

BY

CHARLES E. HELLMAYR

ASSOCIATE CURATOR OF BIRDS

---

WILFRED H. OSGOOD

CURATOR, DEPARTMENT OF ZOOLOGY

EDITOR



CHICAGO, U. S. A.

OCTOBER 18, 1929





FIELD MUSEUM OF NATURAL HISTORY

FOUNDED BY MARSHALL FIELD, 1893

PUBLICATION 263

ZOOLOGICAL SERIES

VOL. XVII, No. 3

---

BIRDS OF THE  
JAMES SIMPSON-ROOSEVELTS  
ASIATIC EXPEDITION

---

BY  
CHARLES E. HELLMAYR  
ASSOCIATE CURATOR OF BIRDS

---

WILFRED H. OSGOOD  
CURATOR, DEPARTMENT OF ZOOLOGY  
EDITOR



CHICAGO, U. S. A.

OCTOBER 18, 1929

PRINTED IN THE UNITED STATES OF AMERICA  
BY FIELD MUSEUM PRESS

L  
173  
p.2

# BIRDS OF THE JAMES SIMPSON-ROOSEVELTS ASIATIC EXPEDITION

---

BY C. E. HELLMAYR

---

The present paper gives an account of the ornithological results of the James Simpson-Roosevelts Asiatic Expedition, undertaken under the auspices of Field Museum of Natural History by Messrs. Theodore and Kermit Roosevelt in 1925. The sons of the former president were accompanied by the veteran naturalist and explorer Mr. George K. Cherrie. While bird-collecting was not the principal aim of the expedition, Mr. Cherrie nevertheless succeeded in accumulating a considerable collection of specimens. The number of species that can be obtained on a hurried trip through difficult mountainous country necessarily constitutes but a small fraction of the actual bird-life, but considering all circumstances Mr. Cherrie deserves full credit for what he accomplished within a few months' time.

Besides the material enumerated on the succeeding pages, the Museum received from the expedition two other lots of bird skins, i.e. one, consisting of 36 species, from the Allapalli Forest, near Chanda, Central Provinces, and a still smaller one from the Nepal Terai, India. As they do not call for any comment, they have not been included in this paper, which thus deals exclusively with the birds collected in Kashmir, Ladak, and Eastern Turkestan (Sinkiang).

The expedition left Srinagar, the capital of Kashmir, May 19, 1925, and followed the Ladak route to Leh, whence it ascended the Nubra Valley, crossed the Karakoram Range, and proceeded via Sughet Pass down the Sanju River to Karghalik and Yarkand. There Mr. Cherrie separated from the rest of the party, and worked slowly northwards along the Yarkand River to Maralbashi, Aksu, and Kisil Bulok, in the southern foothills of the Tian Shan. After crossing the Musart Pass, he collected for several weeks in the vicinity of the upper Tekes River, Tian Shan. About the middle of September, the expedition set out on its return journey and retraced its steps to Maralbashi, whence Mr. Cherrie turned west to Kashgar, and over the Shurbulak Pass reached Irkeshtan early in November.

The list of the localities given below, arranged in chronological order from Mr. Cherrie's diary, will assist, it is hoped, in locating the approximate situation even of those places which are not to be found on any map.

Srinagar, Kashmir . . . . .	May 19
Kangan, Sind Valley . . . . .	May 20
Gund . . . . .	May 21-23
Sonamarg . . . . .	May 23
Baltal . . . . .	May 23-24
Zogi La (Pass over the Great Himalayan Range)	May 25
Matayan, Ladak . . . . .	May 25
Pandras, Gumber River . . . . .	May 25
Dras . . . . .	May 26
Shimsa Kharbu, Dras River . . . . .	May 26
Kargil . . . . .	May 27
Bod Kharbu . . . . .	May 28
Lotsun, Wakka-Chu River . . . . .	May 28
Moulbekh . . . . .	May 28, 29
Fotu La . . . . .	May 30
Lamayuru . . . . .	May 30
Nurle, Indus Valley . . . . .	May 31
Leh . . . . .	June 1- 4
Khalsar . . . . .	June 9
Taghar, Nubra . . . . .	June 9
Panamik, Nubra . . . . .	June 11-14
Sughet Pass . . . . .	June 26, 27
Sughet Karaul . . . . .	June 27
Ali Mazar, Kurghan, Karakash Valley . . . . .	June 30
Ayalik, Sanju River . . . . .	July 2- 3
Tam Karaul, Sanju River . . . . .	July 3
Sanju Bazar, Sanju River . . . . .	July 6
Koshtagh, Kilian River . . . . .	July 6
Karghalik . . . . .	July 8
Yarkand . . . . .	July 12
Echitgo (Carshamba Bazar) . . . . .	July 16, 17

Mesha Yakshamba Mazar . . . . .	July 17
Lailik-ötang . . . . .	July 18
Abad (Charshamba Bazar). . . . .	July 19
Aka-dong, Yarkand River . . . . .	July 19-20
Alager, Yarkand River . . . . .	July 20
Maralbashi . . . . .	July 21
Aksak-märal . . . . .	July 21
Shamal . . . . .	July 23
Maralbashi . . . . .	July 24-29
Conishar, about six miles n.e. of Aksu. . . . .	Aug. 7- 9
Abad, alt. 4,900 feet, southern foothills of Tian Shan. . . . .	Aug. 13
Kisil Bulok, alt. 6,300 feet, southern foothills of Tian Shan . . . . .	Aug. 13
Autain Bulok, South Musart River . . . . .	Aug. 15
South foot of Musart Glacier . . . . .	Aug. 16-17
Han Aulik, North Musart River, Tian Shan . . . . .	Aug. 18-19
Eidinka, North Musart River . . . . .	Aug. 21
Shatta, Tekes River . . . . .	Aug. 23-28
Ox-su, Ox-su River, Tekes Valley. . . . .	Aug. 29-31
Simtash, above the canyon of the Agijas River, (Aug. 31, Tekes Valley . . . . .	Sept. 1
Agijas, Tekes Valley . . . . .	Sept. 2- 6
Camp Mointa River, Tekes Valley . . . . .	Sept. 7- 8
Near mouth of Mointa River . . . . .	Sept. 8-11
Shatta, Tekes River . . . . .	Sept. 13
North Musart River, alt. 8,600 feet . . . . .	Sept. 13
Top of Musart Glacier, alt. 11,800 feet . . . . .	Sept. 14
South foot of Musart Glacier, alt. 8,600 feet . . . . .	Sept. 15
Kailik, alt. 7,500 feet . . . . .	Sept. 16
Kisil Bulok, alt. 6,300 feet. . . . .	Sept. 16-17
Abad, alt. 4,900 feet . . . . .	Sept. 19
Aksu . . . . .	Sept. 20
Yaka-kuduk . . . . .	Sept. 22-23
Tumshok . . . . .	Sept. 24
Oku Mazar . . . . .	Sept. 25, 26

Maralbashi . . . . .	Sept. 26-28
Kashgar . . . . .	Oct. 6-24
Aktam, Kashgar River . . . . .	Oct. 29
Shurbulak Pass, on road to Irkeshtan . . . . .	Nov. 1

The region in which the expedition worked had previously been visited by several naturalists. The foremost collections are those made in the early seventies of last century by the two Yarkand Missions under T. D. Forsyth, whose ornithological results were reported upon by Henderson and Hume, Scully, and Sharpe. Other contributions to the ornithology of the Tarim basin are due to Menzbier, Przewalski, and Schalow, while Dr. W. L. Abbott's travels added considerably to our knowledge of the bird-life of the western Himalayas and Eastern Turkestan. In the Tian Shan Mountains, Severtzow, Almásy, and Merzbacher secured extensive collections. Kashmir and Ladak have lately attracted the attention of various ornithologists, among whom Meinertzhagen, Osmaston, and Whistler may particularly be mentioned. A complete bibliography of the more important faunal papers<sup>1</sup> consulted in the preparation of this memoir will be found at the end.

The bulk of the collection, excepting certain easily identifiable species, has been worked out in the spring of 1928 at the British Museum (Natural History), where the unrivalled series of Indian birds were generously placed at my disposition by Dr. Percy R. Lowe and Mr. Norman B. Kinnear. Additional pertinent material was examined in the Tring Museum and in Col. R. Meinertzhagen's private collection. Subsequent visits to the museums at Paris and Munich enabled me to compare part of M. Babault's collection from the Himalayas and Prof. Merzbacher's large series of Tian Shan birds. Through the courtesy of Dr. C. W. Richmond, numerous specimens from the Abbott collection, preserved in the U. S. National Museum, have been transmitted to me for study, and Mr. Outram Bangs, of the Museum of Comparative Zoology, Cambridge, Massachusetts, aided my work by lending Chinese material needed for comparison. To all of these gentlemen my heartfelt thanks are due, and to Mr. Kinnear I owe a particular debt of gratitude for his unflinching kindness and constant advice while working at the British Museum as well as for much information supplied during the preparation of the manuscript after my return to the United States.

<sup>1</sup>Unfortunately, two papers by Sarudny on the birds of Pamir (*Ann. Mus. Zool. Ac. Sci. St. Pétersb.*, 1914, pp. 439-477; *Bull. Mosk. Naturf. Ges., Biol. Abt.*, 35, 1926, pp. 233-290) and his numerous contributions to the journal of the Turkestan Section of the Russian Geographical Society have been inaccessible.

I also wish to express my indebtedness to Mr. Charles Westcott, of Springfield, Mass., who took great pains in revising the manuscript and checking the spelling of geographical names.

**Corvus macrorhynchos intermedius** Adams. Himalayan Jungle Crow.

*Corvus intermedius* ADAMS, P.Z.S. Lond., 27, p. 171, 1859—"Valley of Cashmere and eastwards, on the ranges near the European stations at Dughai and Simla."

KASHMIR: Kangan, Sind Valley, ♀ ad. (breeding), May 20, 1925.—Wing 335 mm.

Agreeing with specimens from Kashmir in the British Museum and those obtained by W. L. Abbott in the U. S. National Museum. The latter were referred by Richmond (p. 457) to *C. macrorhynchos levaillanti*, now admitted to be a different form which is peculiar to the plains of eastern India, and whose range does not extend beyond the Sulej Valley in the west.

*C. m. intermedius* ranges from Gilgit and Baltistan south to Kashmir and Attak on the Indus (N. W. Frontier Province), and thence west of the Great Himalayan Range through Simla and Nepal to Sikkim. It is common throughout the Sind Valley up to the Zogi La,<sup>1</sup> but does not cross into Ladak.

Both Stresemann<sup>2</sup> and Meinertzhagen<sup>3</sup> include "Chinese Turkestan" in the distributional area of the Himalayan Jungle Crow, without good reasons, it seems to me. This extension appears to be based on Scully's record (p. 157) of "*C. culminatus*" from Yarkand, which was shown by Sharpe (p. 18) to belong to the Carrion Crow, and on Hume's reference<sup>4</sup> to "*C. intermedius*" of certain specimens secured in the same locality by Henderson. Hume, however, was fairly confused about these crows, and no reliance can be placed on his conclusions, since he also attributed Ladak birds to *C. intermedius*, which, of course, must have been *C. c. orientalis*.<sup>5</sup>

Birds from western China (Kansu and Szechwan) are apparently not separable from *C. m. intermedius*. The only difference I can dis-

<sup>1</sup>From Parrot's remarks (Verh. Orn. Ges. Bay., 9, p. 249, 1909) it is quite evident that the specimen obtained by E. Zugmayer on the "Sadschi La" [=Zogi La] and listed as ?*C. corone orientalis* belongs to *C. m. intermedius* and not to the eastern race of the Carrion Crow. This surmise has since been confirmed by Laubmann (in litt.).

<sup>2</sup>Verh. Orn. Ges. Bay., 12, p. 283, 1916.

<sup>3</sup>Nov. Zool., 33, p. 83, 1926.

<sup>4</sup>Henderson and Hume, Lahore to Yarkand, p. 237, 1873.

<sup>5</sup>The single male obtained by Bonvalot and Prince Orléans at Chaklik, Lob Nor region, and listed by Oustalet (1894, p. 53) as "*Corone macrorhyncha*" cannot be properly allocated without careful reexamination.

cover is their very slightly larger bill;<sup>1</sup> but the material at hand being inadequate, the status of *C. m. tibetosinensis* Kleins. and Weigold<sup>2</sup> must be left in abeyance for the present.

It is perhaps safer to use *C. macrorhynchos* as specific term for the Jungle Crow until the relationship of this group to the Australian species has been more thoroughly investigated.

*C. m. intermedius* is distinguished, without difficulty, from the Carrion Crow by stouter bill, smoother nuchal feathers with whitish (instead of gray) bases, and shorter (less lanceolate) throat feathers with oily greenish (instead of purplish) gloss.

### **Corvus corone orientalis** Eversmann. Eastern Carrion Crow.

*Corvus orientalis* EVERSMANN, Addenda Pall. Zoogr., fasc. 2, p. 7, 1841—  
"circa fluvium Narym, ultra oppidum Buchtarma."

LADAK: Shimsa Kharbu, Dras River (alt. 9,700 ft.), ♀ ad. (breeding), May 26, 1925.—Wing 330 mm.

CHINESE TURKESTAN: Lailik, Yarkand River, ♂ ad., ♀ ad. (in worn breeding plumage), July 18, 1925; Kashgar, ♂ ad. (just completing the annual molt), ♀ (first annual), Oct. 9, 14, 1925; Conishar, six mi. northeast of Aksu, ♂ ad. (in full molt), Aug. 8, 1925; Agijas, Tekes Valley, Tian Shan, ♀ ad. (in full molt), Sept. 5, 1925.

The Kharbu bird, which has been carefully compared in the British Museum with an ample series of *C. m. intermedius* from Gilgit, Kashmir, and Murree, is undoubtedly referable to *C. c. orientalis*. Owing to its somewhat worn condition, it shows less purplish gloss on throat and foreneck, but apart from this it agrees in every other detail, particularly in shape of bill and structure of nuchal and throat feathers, with Turkestan examples. It thus appears that *C. m. intermedius* is not found east of the Great Himalayan Range, and that all crows from Ladak, including Osmaston's (Ibis, 1925, p. 672), Ludlow's (Journ. Bomb. Nat. Hist. Soc., 27, p. 141), and Wathen's (Journ. Bomb. Nat. Hist. Soc., 29, p. 696) records of the Jungle Crow, should be referred to *C. c. orientalis*, as has already been intimated by Meinertzhagen (Ibis, 1927, p. 368).

*C. c. orientalis* is evidently the only Crow breeding in Chinese Turkestan, where it was collected by Henderson, Scully, Stoliczka (see Sharpe, under the name *C. corone*, p. 18), Abbott (Richmond, p. 572—Yarkand and Uchturfan), and Zugmayer (Parrot, p. 249—Khotan).

<sup>1</sup>See also Riley, Proc. U. S. Nat. Mus., 70, art. 5, p. 62, 1926.

<sup>2</sup>Abhandl. Ber. Zool. Anthr.-Ethnog. Mus. Dresden, 15, No. 3, p. 2, 1922.



**Corvus corone sharpii** Oates. Sharpe's Hooded Crow.

*Corvus sharpii* OATES, Faun. Brit. India, Birds, 1, p. 20, 1889—"Siberia, Turkestan, Afghanistan and a portion of India"; type locality Siberia.

CHINESE TURKESTAN: Aktam, Kashgar River, west of Kashgar, one ♂ ad., two ♀ ♀ ad., October 29, 1925.

A winter visitor from the north. Scully (p. 156) found the Hooded Crow common at Kashgar and Yarkand from October to March, and specimens were also collected by Stoliczka, when with the Yarkand Mission, at the same places as well as at Sanju in November, 1873 and January, 1874. Besides, it has been met with in winter time in Gilgit, Baltistan, and in the Tian Shan. Its breeding range extends from the Ural Mountains and the Caspian Sea throughout the plains east to the Yenisei and Lake Baikal.

It is now generally agreed that Carrion Crow and Hooded Crow, long separated specifically, are merely races of a single systematic unit.<sup>1</sup>

**Corvus frugilegus tshusii** Hartert. Eastern Rook.

*Corvus frugilegus tshusii* HARTERT, Vög. Pal. Fauna, 1, p. 14, Nov., 1903—Gilgit.

CHINESE TURKESTAN: Kashgar, ♀ ad., Oct. 24, 1925.

The bird agrees with the type and a series of winter birds from Turkestan and the Vale of Kashmir. Every one of these twelve specimens has a much slenderer and decidedly longer bill than any of the eighty-six skins in Field Museum from Germany, Italy, and other parts of Europe, and the constancy of this feature seems to indicate that *C. f. tshusii* is a perfectly valid form. Birds from Turkestan, including two collected by W. L. Abbott at Uchturfan on November 15, 1893, are on average less glossed with purple below than those from Gilgit and Kashmir, but the same, if not more, variation may be observed in our series of the European Rook, and I do not believe they can possibly belong to *T. f. ultimus* Sushkin<sup>2</sup>, of the Altai region.

The Rook is a winter visitant in Turkestan. Scully (p. 157), who met with it in winter about Kashgar and Yarkand, tells us that in the beginning of April the birds migrate northward, and are said to breed in the hills near Aksu. The Second Yarkand Mission, as recorded by Sharpe (p. 15), secured a number of specimens during

<sup>1</sup>See W. Meise, Journ. Orn., 76, pp. 1-150, pls. I-IV, 1928.

<sup>2</sup>List and Distribution of Birds of the Russian Altai etc., p. 65, 1925—Katunskoie, distr. of Biisk.

the cold season in the plains of Kashgaria, and Dr. Abbott (see Richmond, p. 571) shot a couple at Uchturfan.

The breeding area of the Eastern Rook is supposed to extend from northern Persia through the plains of Turkestan and Siberia east to the Irtysh<sup>1</sup>.

**Coloeus monedula soemmeringii** (Fischer). Eastern Jackdaw.

*Corvus soemmeringii* FISCHER, Mém. Soc. Natur. Moscou, 1, p. 3, pl. 1, 1811—Moscow, Russia.

CHINESE TURKESTAN: Conishar, six mi. northeast of Aksu, ♂ (first annual, molting), Aug. 9; Shatta, Tekes Valley, Tian Shan, ♀ ad. (molting), Aug. 24; Agijas River, Tekes Valley, ♂ ad. (molting), Sept. 3, 1925.

These specimens—undoubtedly breeding birds—are indistinguishable, in size as well as coloration, from a series collected at Skoplje, Macedonia (topotypical of *collaris*), in Field Museum. The only measurable example has a wing of 235 mm., while other Turkestan skins in the British Museum and Munich collections vary between 220 and 240 mm. Therefore, I cannot but agree with Meinerzhagen<sup>2</sup> that *C. ultracollaris* Kleins<sup>3</sup> is inseparable from *C. m. soemmeringii*. The type—with a wing of 255 mm.—must have been an individual variant of unusually large size.

According to Scully (p. 158), the Jackdaw visits Kashgar and Yarkand only in winter, but breeds in the Aksu forests, where one of our specimens was actually taken. The Second Yarkand Mission also met with it, likewise in winter, at various localities in the Yarkand plains, and Dr. W. L. Abbott secured a single adult male, in November, 1893, at Uchturfan, as recorded by Richmond (p. 572).

**Pica pica bactriana** Bonaparte. Kashmir Magpie.

*Pica bactriana* BONAPARTE, Consp. Av., 1, p. 383, 1850—exclusively based on *Pica caudata* Blyth, Cat. B. Mus. Asiat. Soc., 1849, p. 91, spec. E, Kandahar, Afghanistan (not "eastern Persia," as stated by Bonaparte).

LADAK: Kargil (alt. 8,800 ft.), ♂ ad., May 27; Nurle, Indus Valley (alt. 11,000 ft.), ♀ ad. (breeding), May 31; Leh, ♂ ad., June 3, 1925.—Wing 213-216 mm.

All are adult birds with the first primary decidedly falcate and edged with blackish along the outer web only. The blackish edging

<sup>1</sup>Baker (Fauna Brit. India, 2nd ed., Birds, 1, p. 30, 1922) attributes a nest with eggs taken by a native collector in Ladak to this species, but as the Rook has not been found breeding there by anybody else, this record requires corroboration by more substantial evidence.

<sup>2</sup>Nov. Zool., 33, pp. 75-76, 1926; Ibis, 1927, p. 369.

<sup>3</sup>Falco, 14, No. 2, "1918," p. 16, pub. April, 1919—Narynsk, Tian Shan.

to the other primaries, though somewhat variable, is always more restricted than in any of our twenty-four European specimens, from which the Ladak birds, in addition, differ by longer, more greenish tail and less bluish secondaries. In dimensions as well as in coloration and wing markings, they appear to me indistinguishable from Baluchistan (Kalat) and east-Persian examples, and I do not see how *P. p. laubmanni* Stres.<sup>1</sup> can be maintained. Stresemann obviously mistook birds from Turkestan for *P. p. bactriana* and, while correctly recognizing the differences, named the wrong form. Dr. Richmond kindly sent me the three examples listed by him (p. 458) as *P. pica* in the report on Dr. Abbott's collection. The male from Dras is an adult bird with narrow, strongly falcate first primary. In the extent of black on the primaries, it agrees with our specimen from Kargil. The two others, both from Baltistan, are birds of the first year with broader, black-tipped first primary and much more extensive black markings on the other primaries. As pointed out by Stegmann<sup>2</sup>, this is merely a matter of age. All of Abbott's skins are doubtless referable to *P. p. bactriana*.

*P. p. bactriana* is widely distributed in Ladak, north to Nubra and east to the vicinity of Pangong Lake.<sup>3</sup> It is found in small numbers in Baltistan (down the Dras River to Skardu), but does not occur in Kashmir proper.<sup>4</sup> Its occurrence in Kumaon, the Simla Hills, and Garhwal, included by Baker in its range, appears to be open to doubt. In the west, it stretches through Baluchistan and Afghanistan into Persia and, according to Stegmann, through the lowlands of Russian Turkestan and Transcaspia into the south-eastern provinces of European Russia.

### *Pica pica hemileucoptera* Stegmann. Turkestan Magpie.

*Pica pica hemileucoptera* STEGMANN, Ann. Mus. Zool. Acad. Sci. U.R.S.S., 28, p. 372, 1927—Nishneudinsk, Siberia.

CHINESE TURKESTAN, TIAN SHAN: Agijas, Tekes Valley, ♂ (end of juvenile molt), Sept. 3, 1925.

In addition, I have been able to examine a number of adults from the Tian Shan in the Munich Museum. The distinctions pointed out by Stegmann hold good, when birds in corresponding plumage are compared.

<sup>1</sup>Journ. Orn., 76, p. 342, 1928—Kalat, Baluchistan.

<sup>2</sup>Ann. Mus. Zool. Acad. Sci. U.R.S.S., 28, pp. 368-369, 1927.

<sup>3</sup>Babault (Mission, Rés. Scient., p. 132, 1920) erroneously refers the Magpies collected in Ladak to two different races, viz. *P. p. bactriana* and *P. p. bottanensis*.

<sup>4</sup>See Osmaston, Journ. Bomb. Nat. Hist. Soc., 31, No. 4, p. 977, 1927.

The distribution of *P. p. hemileuoptera* having been discussed at length by Mr. Stegmann, we need not dwell any further on the subject. Although specimens are not available for examination, it is hardly doubtful that the Magpies observed (or collected) by Henderson (p. 240), Scully (p. 158), and Stoliczka (Sharpe, p. 19) in the Sanju region on the southern border of the Tarim basin belonged to *P. p. hemileuoptera* rather than *P. p. bactriana*, since the latter is not likely to cross the Karakoram Range to the north. The two adult males from Kashgar, recorded by Richmond (p. 572) s.n. *P. pica leuconotos*, are typical of *hemileuoptera*, and have decidedly narrower blackish margins to the inner web of the outer primaries than even the bird from Leh, mentioned under the preceding heading, with the least amount of black on the wings.

***Nucifraga caryocatactes rothschildi* Hartert.** Tian Shan Nutcracker.

*Nucifraga caryocatactes rothschildi* HARTERT, Vög. Pal. Fauna, 1, Part 1, p. 27, Nov., 1903—south of Issik-kul, Tian Shan.

CHINESE TURKESTAN, TIAN SHAN: Eidinka, North Musart River, ♂ ad., ♀ ad., Aug. 21; Shatta, Tekes River, ♀ ad., Aug. 25; Agijas River, Tekes Valley, ♂ ad., ♀ ad., Sept. 5; Mointa (alt. 7,500 ft.), Tekes Valley, ♂ ad., Sept. 7, 1925.

All of these specimens are adult, as evidenced by the squarely rounded tips and short white apical spots of the lateral rectrices. They are just finishing their annual molt; four birds have completed the renewal of the flight quills, and show but a few pin-feathers in the body plumage, while in two others (♂, Eidinka; ♀, Shatta) some of the rectrices and outer primaries are still in the process of molting. This condition tends to indicate that the Tian Shan Nutcracker breeds at a later period than its European ally.

*N. c. rothschildi* is easily distinguished from the Siberian form (*N. c. macrorhynchos*) by much darker, more blackish brown coloration and larger white spotting on the lower parts. The wing measures as follows: males, 195, 197, 200; females, 193, 203 mm. Five (out of six) specimens have, in opposition to Hartert's description, very distinct, though narrow white apical edges to the median quill feathers. One of the skins has a number of small white spots on the rump, another distinct white tips to some of the upper tail coverts—suggesting an approach to *N. c. multipunctata*, of the northwestern Himalayas, which, however, has much more white in the tail, much larger white spots both above and below, and white-spotted rump and upper tail coverts, not to mention some minor differences. The

breeding range of *N. c. rothschildi* is apparently restricted to the Tian Shan system, east at least to the Bogdo-ola Range,<sup>1</sup> and stretching west to the Ferghana Range.<sup>2</sup>

***Pyrrhocorax pyrrhocorax himalayanus* (Gould). Himalayan Red-billed Chough.**

*Fregilus himalayanus* GOULD, P.Z.S. Lond., 1862, p. 125—Himalayas.

LADAK: Bod Kharbu (alt. 10,400 ft.), two ♂♂ ad., May 28; Panamik, Nubra, ♂ ad., June 14; Sughet Valley (alt. 14,600 ft.), ♂ ad., end of June, 1925.

CHINESE TURKESTAN, HILL YARKAND: Ayalik, Sanju Valley (alt. 13,000 ft.), ♂ ad., July 2, 1925.

The birds taken in June are beginning to molt. The two males from Kharbu—the only ones with measurable wings—are somewhat smaller (wing 300 and 305 mm.) than the figures given by Meinertzhagen (Ibis, 1927, p. 372) for a series of skins from Ladak and Sikkim; while not appreciably larger than European specimens, they differ by having the wings and tail glossed with bluish rather than greenish. The distance between the fifth and sixth primaries is from 15 to 20 mm.

Birds from the Tian Shan (*P. p. centralis* Stres.<sup>3</sup>) appear to be separable by narrower primaries and tail feathers as well as by more pointed wings, the distance between the tips of the fifth and sixth primaries ranging from 25 to 30 mm. In measurements and coloration, the Tian Shan specimens in Field Museum are not different from *himalayanus*, so far as I can see.

The Red-billed Chough is a common resident throughout the alpine regions of the Himalayas, southern Tibet, and western China.

<sup>1</sup>See Pleske, Bull. Acad. Sci. St. Pétersb., nouv. sér., 3, p. 119, 1892.

<sup>2</sup>Stolzmann's comments (Bull. Soc. Natur. Moscou, nouv. sér., 11, p. 58, 1897) on four Nutcrackers obtained by T. Barey, in May, 1895, at "Tarta-Koule" and "Savayardyne," 200 versts northeast of Gulcha, leaves hardly any doubt as to their identity with the form under discussion. Laubmann's suggestion (Abhandl. Bayr. Ak. Wiss., Math.-phys. Kl., 26, No. 3, p. 41, 1913) that they might be referable to *N. c. multipunctata* does not seem to be well founded in view of the fact that this last-named race has never been found outside the Indian Empire, being evidently restricted to the northwestern Himalayas.

<sup>3</sup>Journ. Orn., 76, p. 344, 1928—Mountains near Jarkent, Semiryechensk, Turkestan.

***Pyrrhocorax graculus forsythi* Stoliczka.** Eastern Yellow-billed Chough.

*Pyrrhocorax forsythi* STOLICZKA, *Stray Feathers*, 2, p. 462, 1874—between Lamayuru and the Indus, Ladak.

LADAK: Panamik, Nubra, ♂ ad., June 12, 1925.

CHINESE TURKESTAN: Upper Sanju Valley (alt. 13,000 ft.), Hill Yarkand, ♂ ad., July 2; foot of Musart Glacier, Tian Shan (alt. 8,600 ft.), two ♂♂ ad., Sept. 15; top of Musart Glacier (alt. 11,800 ft.), Sept. 14, 1925.

Compared with a series from the Bavarian Alps (Schöntel, Algäu) in Field Museum, these birds are considerably larger and have stouter as well as longer bills. The same divergency having been noted by Whistler (*Ibis*, 1925, p. 164) and Meinertzhagen (*Ibis*, 1927, p. 373), it seems appropriate to keep the Central-Asiatic birds separate under Stoliczka's name, although this author's description, based on a single young bird with dark feet and partly brown bill, is altogether misleading.

The length of the wing in Bavarian males varies from 248-267; in those from Ladak and Turkestan, from 280-290 mm.

The Yellow-billed Chough is sparingly diffused throughout the western Himalayas from Baltistan and Kashmir to Lahul. It is perhaps more common in Turkestan, specimens having been taken in Sarikol by Abbott<sup>1</sup>, north of Shahidula in the upper Karakash Valley and at Sasstekke, near Kashgar, by the members of the Second Yarkand Mission<sup>2</sup>, at Tam, Sanju Valley by Scully,<sup>3</sup> and in the Tian Shan Mountains by Russow, Merzbacher, and others.

***Podoces hendersoni* Hume.** Henderson's Chough-Thrush.

*Podoces hendersoni* HUME, *Ibis*, (3), 1, p. 408, 1871—"collected during the Yarkand Expedition," no locality specified; HENDERSON and HUME, Lahore to Yarkand, p. 244, pl. 22, 1873—the types (two males) were obtained on the road from Sanju to Koshtagh and at Oi Tograk, in the Yarkand plains.

CHINESE TURKESTAN: Abad (alt. 4,900 ft.), northeast of Aksu, ♂ ad., ♀ ad., ♂ imm., Sept. 18, 1925.—Wing (male) 148, (female) 145 mm.

The immature bird is paler throughout, and the pileum still shows a number of the dark brown, whitish-tipped feathers of the juvenile plumage.

This striking bird is a characteristic species of the deserts of

<sup>1</sup>*Pyrrhocorax pyrrhocorax* RICHMOND, p. 572.

<sup>2</sup>*Pyrrhocorax pyrrhocorax* SHARPE, p. 22.

<sup>3</sup>*P. alpinus*, p. 162.

Central Asia. Originally discovered by Dr. Henderson, naturalist of the First Yarkand Mission, at the north foot of the Yarkand Hills, it was afterwards met with in the same district by Scully (p. 159) and Forsyth's party (Sharpe, p. 23), while Biddulph secured it at Tughamati, near Kashgar. Abad, where our specimens were obtained, lies in the southern foothills of the Tian Shan, south of Kisil Bulok, whence Menzbier (*Ibis*, 1885, p. 353) had already recorded the species. Bonvalot and Prince Orléans, as reported by Oustalet (1894, p. 46), also encountered it at the southern foot of the Tian Shan, north of the Bagrash-kul, and Schalow (1901, p. 437) lists a male secured by Holderer at Uksalur, west of Kashgar. *P. hendersoni* has been recorded, furthermore, from the Gobi Desert and Zaidam, though it appears rather doubtful from literature whether those birds have ever been directly compared with material from the Tarim basin.

### ***Sturnus vulgaris humii* Brooks. Himalayan Starling.**

*Sturnus humii* BROOKS, *Ibis*, (6), 3, No. 24, p. 500, Oct., 1876—based on *Sturnus nitens* (not of Brehm, 1831) Henderson and Hume, Lahore to Yarkand, p. 250, pl. 24, Srinagar, Kashmir.

KASHMIR: Gund (alt. 7,000 ft.), Sind Valley, ♀ ad., May 21, 1925.

This well-marked race is a common breeding bird in Kashmir, where it has been met with by numerous travelers,<sup>1</sup> and stretches westward into the N. W. Frontier Province (Valley of Peshawar). No Starling breeds in Ladak, and although Hartert (*Vög. Pal. Fauna*, 1, p. 45), Jordans (*Arch. Naturg.*, 89, A, Heft 3, p. 67, 1923), and Baker (*Fauna Brit. India*, 2nd ed., *Birds*, 3, p. 32, 1926) give its breeding range as extending east to Nepal, I cannot find in literature any authority for this statement. On the contrary, Whistler<sup>2</sup> emphatically denies that the Himalayan Starling breeds anywhere in the Kangra Valley, Kulu, Lahul, Spiti, the Simla Hills, or British Garhwal, but we are informed by the same naturalist that it winters in small numbers in extreme northern Punjab. Contrary to Jordans's assertion (*loc. cit.*), it has never been found in Sind Province.<sup>3</sup>

### ***Sturnus vulgaris porphyronotus* Sharpe. Purple-backed Starling.**

*Sturnus porphyronotus* SHARPE, *Ibis*, (5), 6, p. 438, 1888—"Afghanistan and in winter dress from the plains of India," errore; the type is from

<sup>1</sup>See among others Hume and Henderson (p. 250), Sharpe (p. 25, *S. indicus*), Richmond (p. 460), and Meinertzhagen (*Ibis*, 1927, p. 375).

<sup>2</sup>*Journ. Bomb. Nat. Hist. Soc.*, 28, p. 995, 1922.

<sup>3</sup>See Ticehurst, *Ibis*, 1922, p. 620.

Yarkand, Turkestan (see Cat. B, Brit. Mus., 13, p. 38, pl. 2, 1890).<sup>1</sup>

CHINESE TURKESTAN: Koshtagh, Kilian River (alt. 6,000 ft.), Hill Yarkand, ♂ ad. (nuptial), ♂ (juvenile plumage), July 6; Echitgo (Carshamba Bazar), Yarkand River, ♂ ad., ♀ ad. (worn breeding plumage), July 16; Lailik-ötang, Yarkand River, ♂ ad. (worn breeding), July 18; Maralbashi, Kashgar River, two ♂♂ ad. (nuptial), ♂ juv., July 27, 28; Conishar (six miles northeast of Aksu), ♂ ad. (molting), Aug. 7; Kashgar, three ♂♂ ad., two ♀♀ ad. (winter), Oct. 13, 17, 22, 1925.

The series well illustrates the various plumages of the Turkestan Starling. The adult birds obtained on the Kilian and Yarkand rivers are in abraded breeding dress, the female from Echitgo being particularly worn. The two males from Maralbashi, shot on July 27, have just started on their annual molt, while that from Conishar, secured on August 7, has already renewed the greater part of its plumage. The birds taken in October at Kashgar wear the fresh autumn plumage, profusely spotted all over with buff and white. Aside from the presence or lack of spotting according to season, the adults are very uniform in coloration, the head all round being bronze green in abrupt contrast to the bluish or reddish purple of the back, rump, scapulars and under parts. The juvenile plumage is somewhat paler than the corresponding stage of *S. v. vulgaris*, the most striking difference being the pale creamy-buff coloration of the axillaries and under wing coverts, which are largely grayish brown in the typical race.

*S. v. porphyronotus* is evidently the only Starling breeding in the Tarim basin. It is doubtless the present form that was obtained by Henderson in August near Yarkand,<sup>2</sup> and of which Scully<sup>3</sup> speaks as being very common in the plains of Kashgaria. Abbott secured two adult females at Karghalik on August 12, 1893, as recorded by Richmond (p. 573); the Second Yarkand Mission met with it at Sanju, Yarkand, and Kashgar (Sharpe, p. 26); and Zugmayer shot an adult bird at "Tsarbakh," near Posgam, on May 11, 1906, as mentioned by Parrot (p. 254). It also breeds in the Tian Shan and other parts of Turkestan.

About its characters, variation, and distribution, the remarks by Hartert<sup>4</sup> and Jordans<sup>5</sup> should be consulted.

<sup>1</sup>Although Sharpe, in the original account, was quite confused about the range, his description is clearly referable to the purple-backed breeding form of Turkestan, and we may, therefore, accept his later designation of Yarkand as type locality.

<sup>2</sup>*Sturnus vulgaris* HENDERSON and HUME, Lahore to Yarkand, p. 250.

<sup>3</sup>*Sturnus vulgaris* Stray Feathers, 4, p. 162.

<sup>4</sup>Nov. Zool., 25, p. 334, 1918.

<sup>5</sup>Arch. Naturg., 89, A, Heft 3, pp. 51-57, 1923.



In addition to the series enumerated above, Field Museum has specimens obtained by Akulin at Narynsk, Tian Shan.

***Sturnus vulgaris poltaratskyi* Finsch. Poltaratsky's Starling.**

*Sturnus poltaratskyi* FINSCH, P.Z.S. Lond., 1878, p. 712—Lake Markakul, Chinese Altai.

CHINESE TURKESTAN: Abad (alt. 4,900 ft.), ♀ ad. (winter dress), Sept. 18, 1925.

This bird is totally different from the series listed as *S. v. porphyronotus*, which includes a number of skins (from Kashgar) in perfectly comparable plumage. Pileum, sides of head, and throat are reddish purple (instead of bronze green); the back and rump bright bronze green, not purple; the upper wing coverts bluish green instead of bronze or coppery purple; the under parts, below the bronze green chest band, are dark greenish blue glossed with violet on the flanks, instead of being reddish purple passing into bronze on the latter. Besides, the buff edges to the quills, wing coverts, and rectrices are much wider and brighter, while the bill is shorter and stouter. The bird closely resembles certain specimens of the European Starling in fall plumage, but has much wider, paler buff edges to axillaries and under wing coverts, and much paler, less cinnamonaceous markings on the wings and tail feathers.

It is evidently a migrant from the north, and doubtless belongs to *S. v. poltaratskyi*, which breeds in western Siberia and winters in the plains of India. Richmond (p. 573) had recorded a single female taken by Dr. Abbott on October 29, 1893 in the Tian Shan, north of Kashgar, under the name of *S. v. menzbieri*, now conceded<sup>1</sup> to be inseparable from *S. v. poltaratskyi*. It agrees in every detail with the specimen obtained by Mr. Cherrie.

***Oriolus oriolus kundoo* Sykes. Indian Oriole.**

*Oriolus kundoo* SYKES, Proc. Comm. Sci. Corresp. Zool. Soc. Lond., 2, p. 87, July, 1832—Dukhun, India.

KASHMIR: Gund (alt. 7,000 ft.), ♂ ad., May 21, 1925.—Wing 141.

CHINESE TURKESTAN: Sanju Bazar, Sanju River (alt. 6,600 ft.), Hill Yarkand, ♂ (first annual), July 6; Maralbashi, Kashgar River, ♂ ad., July 28, 1925. (Wing 144).

The adult male from Maralbashi agrees in all essential points, viz. small size, slender, elongated bill, great extent of yellow on primary coverts and lateral rectrices, and black streak behind the

<sup>1</sup>See Hartert (Nov. Zool., 25, p. 333, 1918) and Jordans (Arch. Naturg., 89, A, Heft 3, pp. 22-27, 1923).

eye, with specimens from Gilgit, Kashmir, and other Indian localities. Hume (Lahore to Yarkand, p. 201) had already pointed out that the birds collected by Henderson at Bora and Oi Tograk, in the plains of Yarkand, were referable to the Indian form of the Golden Oriole. The same race was later met with during the breeding season at Yarkand by Scully (p. 140); at Yarkand and Kisil by the Second Yarkand Mission (Sharpe, p. 24); at Yarkand by Abbott (Richmond, p. 573); at Chullak and Khotan by Zugmayer (Parrot, p. 253). Thus it seems to be well established that *O. o. kundoo* is the only form of oriole breeding in the Tarim basin. In the west, it ranges through the Pamir into eastern Bokhara (Bianchi, p. 368), Ferghana (Stolzmann, p. 59), and the southern districts of Sir Darya. In the last named province, Severtzow (1875, p. 191) was the first to record it from Chimkent, Tashkent, and Khojent, and he states that it mounts in the valley of the Chirchik up to nearly 7,000 feet. According to Pleske (1888, p. 15), V. Russow found it breeding at various places in the Chatkal-tau, east of Chinaz, and from the same region Alexejew secured a series in June and late in May on the Pskem River (a tributary of the Chir-lik), as recorded by Kollibay,<sup>1</sup> while Gyldenstolpe (p. 3) lists two females from Tashkent in a collection received by the Stockholm Museum. It also breeds in small numbers in British Baluchistan (Quetta Valley) and onward to Afghanistan (Kandahar).<sup>2</sup>

I do not see how Turkestan specimens—which, according to Snigirewski,<sup>3</sup> have been named *O. k. turkestanicus* by Zarudny and Kudashev—can be separated. The wings in ten breeding adult males measure from 140 to 147, while in Indian birds they run from 136 to 142 mm.

### *Oriolus oriolus oriolus* (Linnaeus). Golden Oriole.

*Coracias oriolus* LINNAEUS, Syst. Nat., 10th ed., 1, p. 107, 1758—Europe, sc. Sweden.

CHINESE TURKESTAN: Ox-su, Tekes Valley, Tian Shan, one ♀ (ad.), Aug. 30, 1925.—Wing 154 mm.

This specimen which, in spite of its blackish bill, has all the appearance of an adult bird, as far as the coloration of the exceedingly fresh plumage is concerned, agrees in size, shape of bill, and other characters with *O. o. oriolus*, although it is somewhat more heavily streaked below than any of our ten females from various

<sup>1</sup>Journ. Orn., 64, pp. 241-243, 584-585, 1916.

<sup>2</sup>Ticehurst, Journ. Bomb. Nat. Hist. Soc., 31, No. 3, p. 703, 1926.

<sup>3</sup>Journ. Orn., 70, p. 590, 1928.

parts of Europe (Germany, Roumania, Jugoslavia). Compared with six females of *O. o. kundoo* from Sirur, Bombay Presidency, it is much larger (wing 154, against 129-140 mm.), has a shorter, stouter bill, and much shorter yellow tips to the lateral rectrices, not to mention several minor differences.

There does not seem to be any definite breeding record of the Golden Oriole in the Tian Shan proper. Merzbacher's<sup>1</sup> specimens from the "Dscher-galan" [=Jargalan] Valley (east of the Issik-kul) and Narynsk, secured in April and September, are not conclusive and might have been migrants; and Severtzow (1875, p. 191), who claims to have collected the European form at Aulie-ata and farther east in the Tian Shan, leaves the reader in the dark as to the season. On the other hand, it appears to be certain that the Indian *O. o. kundoo*, while breeding in Ferghana and in the Chatkal-tau, does not occur, even as a migrant, anywhere in the Tian Shan.<sup>2</sup>

### *Carduelis carduelis paropanisi* Kollibay. Tian Shan Goldfinch.

*Carduelis caniceps paropanisi* KOLLIBAY, Ornith. Monatsber., 18, p. 148, 1910—"Narin-tal, Hindukush, N. Afghanistan," errore; the type locality is Narynsk, Tian Shan (see Kollibay, Journ. Orn., 64, p. 586, 1916).

CHINESE TURKESTAN, TIAN SHAN: Shatta, Tekes River, ♀ ad., (worn breeding), ♂ juv., ♀ juv., Aug. 24; Ox-su, Ox-su River, ♂ juv., Aug. 31; Simtash, above the canyon of the Agijas River, two ♀ ♀ juv., Aug. 31, 1925.

The adult bird agrees with several topotypes from Narynsk in Field Museum. The other examples are in juvenile plumage with spotted breast and back and without any red about the head.

This is the Goldfinch breeding in the valleys of the Tian Shan, from the Issik-kul and Narynsk eastward to the Tekes River and its tributaries. The western limits of its range are hard to define at present. In Ferghana, the Chatkal-tau, and southern Sir Darya, it is replaced, according to Zarudny,<sup>3</sup> by a smaller form which he names *C. caniceps subcaniceps*. Kollibay (1916, p. 587) had already pointed out that birds from Tashkent and Pskem (Chir-lik River) were not quite the same as *C. c. paropanisi* from Narynsk. Ticehurst (1927, p. 864), however, claims that there is no difference in

<sup>1</sup>See Schalow (Journ. Orn., 56, p. 119, 1908, s. n. *O. kundoo*) and Laubmann (Abhandl. Bayr. Ak. Wiss., Math.-phys. Kl., 26, No. 3, p. 43, 1913, s. n. *O. oriolus kundoo*).—Laubmann (Orn. Jahrb., 26, p. 13, 1915) later corrected their identification.

<sup>2</sup>Kollibay (Journ. Orn., 64, pp. 241-243, 584-585, 1916), when criticizing Laubmann, was confused about the geography, for not one of his specimens of *O. o. kundoo* received through Alexejew came from the Tian Shan proper.

<sup>3</sup>Mess. Orn., 7, pp. 174-176, 1916.

size between specimens from Ferghana and the Tian Shan, and consequently questions the validity of *C. c. subcaniceps*. Without a sufficient series from the type locality (Kopet-tagh, southwestern Transcaspia) of the latter race the point can hardly be settled. The black-headed and gray-headed Goldfinches are evidently but geographic races of one "formenkreis" and, where representatives of the two groups meet, they have been found freely interbreeding.

***Acanthis cannabina fringillirostris* (Bonaparte and Schlegel).  
Eastern Linnet.**

*Linota fringillirostris* BONAPARTE and SCHLEGEL, Monog. Loxiens, p. 45, pl. 49, 1850—"Nepaul," errore.<sup>1</sup>

CHINESE TURKESTAN, TIAN SHAN: Shatta, Tekes Valley, five ♂♂, two ♀♀ (juvenile plumage), Aug. 24, 1925.

A series of adult birds from the Tian Shan has been examined in the collection of the Munich Museum. I agree with Laubmann's<sup>2</sup> conclusions that *A. c. merzbacheri* Schalow is inseparable from *A. c. fringillirostris*, if birds from the Pamir represent the latter form, whereas *A. c. bella* constitutes a different race distinguishable by the darker brown (less cinnamomeous), more heavily streaked back.

The exact distribution of *A. c. fringillirostris* can hardly be indicated with any degree of accuracy. We know that it breeds in the valleys of the Tian Shan and Pamir, but how far its breeding range extends in the west and east has yet to be ascertained. No Linnet has ever been taken in either Kashmir proper or Ladak, and it is even questionable whether it breeds anywhere within the Indian Empire, although it has been recorded as a rather irregular winter visitor in Gilgit,<sup>3</sup> Baltistan,<sup>4</sup> Rawalpindi (Salt Range),<sup>5</sup> and British Baluchistan.<sup>6</sup>

<sup>1</sup>Hartert (Vög. Pal. Fauna, 1, p. 75, 1903) suggests that the type might have originated from Kashmir, whence there is, however, no authentic record for the Linnet. Schalow (Journ. Orn., 56, p. 211, 1908) tentatively proposes "south-western Asia, perhaps Persia or Transcaucasia" as type locality.

<sup>2</sup>Orn. Jahrb., 26, pp. 18-19, 1915.—See also Kollibay, Journ. Orn., 64, pp. 587-588, 1916.

<sup>3</sup>*Linota cannabina* BIDDULPH, Ibis, 1881, p. 86; 1882, p. 285; SCULLY, Ibis, 1881, p. 579.

<sup>4</sup>*Acanthis cannabina fringillirostris* RICHMOND, p. 461 (one male from Shigar [=Shikar], Jan. 24, 1892).

<sup>5</sup>*Acanthis fringillirostris* WHITEHEAD, Journ. Bomb. Nat. Hist. Soc., 17, p. 243, 1906.

<sup>6</sup>*A. c. fringillirostris* TICEHURST, Journ. Bomb. Nat. Hist. Soc., 31, p. 864, 1927.

***Acanthis flavirostris montanella* (Hume). Stoliczka's Twite.**

*Linota montanella* HUME in Henderson and Hume, Lahore to Yarkand, p. 261 (in text), pl. 26, 1873—Arpalak River, Hill Yarkand (types in British Museum examined).

CHINESE TURKESTAN, HILL YARKAND: Sughet Karaul (alt. 12,000 ft.), ♂ ad., June 27; Tam, Sanju River (alt. 12,000 ft.), July 3, 1925.

These specimens, which are practically topotypes of *L. montanella*, agree with three others obtained by Dr. W. L. Abbott near Sughet, 13,000 ft., in July, 1893, in the collection of the U. S. National Museum. Birds from Gilgit examined at Tring and in the British Museum appear to me inseparable from the present form, and a single female taken by Zugmayer at Polu, in the Keriya Range, on June 15<sup>1</sup> belongs likewise here. Two adult birds in comparable plumage from the Pamir region: a male from the Tagdumbash Pamir (alt. 13,000 ft.), June 13, 1894, and a female from Little Karakul Lake, Sarikol (alt. 12,000 ft.), April 3, 1894, collected by Dr. W. L. Abbott for the U. S. National Museum, I am unable to distinguish by any character from the Sughet specimens, although, according to Sushkin's review,<sup>2</sup> they ought to be referable to *A. f. pamirensis*. They are neither more heavily streaked nor darker colored, and I am inclined to believe that the supposed differences between the two forms are seasonal or individual rather than racial. Birds from the Tian Shan, however, appear to be different, judging from a good series in the Munich Museum, and must stand as *A. f. korejevi* (Sarudny and Härms).<sup>3</sup>

*A. f. montanella* seems to inhabit, at altitudes of from 6,500 to 13,000 ft., the mountain ranges along the southern border of the Tarim basin, from the Pamir east to Zaidam and Nan Shan. Scully (p. 170) found it breeding near the Chuchu Pass and in the upper Karakash Valley; the Second Yarkand Mission, according to Sharpe (p. 29), at Panjah and near Kugiar, south of Karghalik; while Dr. W. L. Abbott, as recorded by Richmond (p. 573), obtained specimens near Sughet as well as in Sarikol and in the Tagdumbash Pamir.

In Ladak it is replaced by the allied *A. f. ladacensis* Meinertz-

<sup>1</sup>Recorded by Parrot (p. 256) as *A. flavirostris brevirostris*.

<sup>2</sup>Proc. Bost. Soc. N. H., 38, pp. 4-11, 1925.

<sup>3</sup>Ornith. Monatsber., 22, p. 53, 1914—Jarkent, Tishkan, and Ilysky, Semiryechensk.

hagen,<sup>1</sup> a somewhat larger form with thicker bill and much more fulvous coloration throughout, the upper parts being buffy brown to tawny olive instead of pale sandy buff, while throat and breast are much more deeply colored, varying from warm buff to near clay color instead of being buffy white, and more heavily streaked with blackish rather than dark brown. It appears to be very close to *A. f. rufostriata* (Walton), from Sikkim and southern Tibet, but not quite so intensely colored. I have examined five specimens obtained by Dr. W. L. Abbott at Gya, Ladak, in July, 1897 and have seen others in Col. Meinertzhagen's collection and at the British Museum.

### *Serinus pusillus* (Pallas). Red-fronted Serin.

*Passer pusillus* PALLAS, Zoogr. Rosso-Asiat., 2, p. 28, pl. 43, fig. 1, 1826(?)—"circa Caucasus et mare caspium frequens..."

LADAK: Lamayuru (alt. 11,500 ft.) one ♂ ad., two ♀ ad., May 30; Panamik, Nubra, two ♂ ad., June 11, 14, 1925.

The Red-fronted Serin is widely diffused throughout the mountainous parts of Palaearctic Asia, from Asia Minor and the Caucasus to Turkestan and the Himalayas as far east as Lahul and Garhwal.

After carefully comparing a large series covering the entire range, I find myself in agreement with Col. Meinertzhagen (1927, p. 380) that there is no sufficient reason for subdividing this species, although birds from Turkestan *generally* are more grayish on the upper parts.

### *Bucanetes*<sup>2</sup> *mongolicus* (Swinhoe). Mongolian Desert Finch.

*Carpodacus mongolicus* SWINHOE, P.Z.S. Lond., 1870, p. 447—Nankow Pass, China.

CHINESE TURKESTAN: Kisil Bulok, South Musart River, ♂ ad., ♀ ad., (in fresh fall plumage), two ♂ ad., one ♀ (in juvenile molt), Sept. 17, 1925.

This bird is so much like *B. githagineus* that one is tempted to regard it as a race of it, and Meinertzhagen (1927, p. 380) actually treats it as such. It is, however, perhaps safer not to go so far at

<sup>1</sup>Bull. Brit. Orn. Cl., 46, p. 96, 1926—Leh, Ladak.—Oberholser (Proc. U. S. Nat. Mus., 22, p. 226, 1900) was the first to point out the characters of this form, calling it *Linota brevirostris pygmaea*. However, *Linota pygmaea* STOLICZKA (Journ. Asiat. Soc. Beng., 37, Part 2, p. 62, 1868—above Chini, Sutlej Valley, and Padam, Ladak) was clearly based on juvenile specimens of *Serinus pusillus*, as is evidenced by the deeply emarginate tail with yellow basis and the yellow edges to the primaries, mentioned in the description.

<sup>2</sup>See Sclater, Bull. Brit. Orn. Cl., 46, pp. 130-131, 1926.

present in view of our unsatisfactory knowledge of the breeding ranges of *B. mongolicus* and *B. g. crassirostris*, which possibly overlap in certain parts of Afghanistan and Persia.

In Turkestan, *B. mongolicus* is reported by Severtzow (Ibis, 1883, p. 56) to breed in the upper alpine region, living among rocks and steep ravines. In winter, it descends to lower altitudes, and then appears in small numbers in the Tarim basin, near Yarkand (Scully, p. 169), at Kasil Bulok and Egin (Menzbier, p. 353), at Kashgar, Chakmak, Tashkurghan, Panjah, and Sanju (Sharpe, p. 36). Dr. Abbott, as recorded by Richmond (p. 574), obtained specimens in the Tian Shan, north of Kashgar. It has also been found in Baltistan and Ladak, and probably breeds in certain parts of the latter country, since Mrs. Wathen (Journ. Bomb. Nat. Hist. Soc., 29, p. 700, 1923) shot a specimen near Lamayuru as late as August 19.

***Erythrina*<sup>1</sup> *rubicilla severtzovi* (Sharpe). Severtzow's Rose Finch.**

*Carpodacus severtzovi* SHARPE, P.Z.S. Lond., 1886, p. 354—Turkestan and Yarkand; type from "Kashgar,"<sup>2</sup> coll. Dr. Bellew (see Kinnear, Ibis, 1922, p. 523).

LADAK: Panamik, Nubra, (♀) ad., June 13, 1925.

CHINESE TURKESTAN: Tam Karaul, Sanju River (alt. 10,000 ft.), Hill Yarkand, two ♂♂ ad., two ♀♀ ad., (worn breeding), July 3; foot of Musart Glacier, Tian Shan, ♂ ad., (worn breeding), Aug. 16, 1925.

Two additional adult males from Sanju Pass (alt. 15,000 ft.), secured by J. Biddulph on October 22 and 24, 1874, have been examined in the British Museum, and the U. S. National Museum kindly lent me an adult male obtained by W. L. Abbott on July 18, 1893, in the Nubra Valley, Ladak, at 10,000 feet elevation.

The series agrees in every respect with the type and fifteen skins from the central Tian Shan (Issik-kul; Narynsk) and Ferghana (vicinity of Gulcha). Four adult males from Gilgit (January, February) and Punja-Wakham (April) collected by J. Biddulph, in the British Museum, are likewise inseparable from Turkestan birds in comparable plumage. The males are practically unspotted on

<sup>1</sup>*Erythrina* BREHM, 1828 replaces *Carpodacus* KAUP, 1829. See Stresemann, Ornith. Monatsber., 30, p. 60, 1922.

<sup>2</sup>Locality no doubt inaccurate, since this Rose Finch, an inhabitant of high elevations, is not likely to occur near Kashgar. The type, which we have examined in the British Museum and found identical with our specimens from the Sanju Valley, probably originated from Hill Yarkand, and we accordingly suggest Tam Karaul, upper Sanju River, as an appropriate type locality.

the back; the females show obsolete dusky centers to the feathers of the crown and mantle, and pale brown streaks on the anterior under parts and flanks.

Severtzow's Rose Finch evidently breeds in the mountain chains bordering the Tarim basin north, west, and south, whence its range extends through Ladak, Rupshu, Lahul, and Spiti to southern Tibet.

Baker<sup>1</sup> treats it as a distinct species, regarding "*Carpodacus rubicilloides*" as a race of the Caucasian *E. rubicilla*. We cannot possibly agree to this arrangement.<sup>2</sup> *E. r. rubicilla* and *E. r. severtzovi* are unquestionably geographical races of the same "formenkreis," agreeing, as they do, in the proportion of the fifth primary as well as in general coloration, particularly in the uniform (unspotted) back of the male sex. Females from Caucasia, too, are very similar to those of *severtzovi*, and differ merely by slightly more grayish upper, and more boldly streaked under parts.

*E. rubicilloides rubicilloides* and its races *lapersonnei* and *lucifer*,<sup>3</sup> on the other hand, have a comparatively longer fifth primary. The males have the back marked with conspicuous blackish brown spots, and the red of the forecrown and underparts is of a deeper tone. The females are even more different, having the entire upper parts, from the forehead to the tail coverts, heavily spotted with blackish, and the whole of the ventral surface boldly streaked with blackish brown. I fully concur with Col. Meinertzhagen (Ibis, 1927, p. 385) that this group is specifically different from *E. rubicilla*. There can be but little doubt that *E. r. severtzovi* and *E. rubicilloides lapersonnei* breed side by side in certain parts of the eastern Himalayas. Re-examination of M. Babault's material<sup>4</sup> in the Paris Museum shows that two (out of four) adult males in worn breeding garb, collected in the gorges at Puga, Rupshu, in the last days of July, 1914, belong to *E. r. lapersonnei*, whereas the two others are perfectly typical examples of *E. r. severtzovi*. The British Museum, too, possesses a couple of adults of *E. r. lapersonnei* secured by J. Biddulph on September 18 and 19, 1873, on the shore of Pangong Lake, while another adult male shot by George Henderson in the same locality on October 9, 1870, and preserved in the same collection is unmistakably *E. r. severtzovi*. Oustalet (pp. 33, 35) likewise records the two species as having been obtained by Prince Orléans and Bonvalot on April 12, 1890, at Tandi, on the Tibetan plateau.

<sup>1</sup>Fauna Brit. India, 2nd ed., Birds, 3, p. 139, 1926.

<sup>2</sup>See also Rothschild, Nov. Zool., 33, p. 331, 1926.

<sup>3</sup>Meinertzhagen, Bull. Brit. Orn., Cl., 46, p. 83, 1927 (types examined).

<sup>4</sup>*Carpodacus severtzovi* BABAULT, Mission, Rés. Scient., Ois., p. 189, 1920.



I strongly doubt the locality "Kashgar" of the specimen discussed by Meinertzhagen,<sup>1</sup> and do not believe that any representative of the *rubicilloides* group is found in the Tarim basin. Meinertzhagen's suspicion (Ibis, 1927, p. 386) that *Carpodacus rhodochlamys* of the Second Yarkand Mission (Sharpe, p. 42) might be referable to *E. rubicilloides lapersonnei* is unfounded, since two of the specimens (No. 1143, ♂ ad. Kashgar, Dec. 13, 1873; No. 1371, ♂ ad. Jaitava, north of Altum Artush, Feb. 21, 1874. Stoliczka), which are still in the British Museum, clearly belong to the *E. rhodochlamys* section.

**Erythrina erythrina roseata** (Blyth). Indian Rose Finch.

*Pyrrhula roseata* (Tickell MS.) BLYTH, Journ. Asiat. Soc. Beng., 11, (1), p. 461, 1842—India, no locality specified.

LADAK: Pandras, Gumber River (alt. 11,600 ft.), ♂ ad., May 23; Shimsa Kharbu, Dras Valley (alt. 9,800 ft.), ♂ ad., ♀ ad., May 26; Nurle, Indus Valley (alt. 11,000 ft.), ♂ ad., May 31; Leh, ♂ ad., June 5; Panamik, Nubra, four ♂♂ ad., two ♂♂ (second year), three ♀♀ ad., June 11, 12, 19, 1925.

CHINESE TURKESTAN: Sanju Bazar, Sanju River (alt. 6,600 ft.), Hill Yarkand, ♂ (second year), July 5, 1925; Shatta, Tekes River, Tian Shan, ♂ juv., Aug. 23; Tekes Valley, near mouth of Mointa River, ♂ juv., Sept. 9, 1925.

In addition, Field Museum has specimens from Narynsk, Tian Shan, collected by Datschenko and Laurenty. I do not find any difference, either in size or color, between birds from Ladak and those from the Tian Shan. The length of the wing in Ladak specimens ranges from 83 to 87 mm., thus agreeing well with the figures given by Laubmann<sup>2</sup> for a Turkestan series.

The three races of the Rose Finch are certainly very close to each other, and a good many examples could not be allocated to any race without knowledge of their origin. Still, taken as a whole, birds from the western and eastern Himalayas and from Turkestan, in variation and size, appear to be more nearly alike *inter se* than they are to the Caucasian race (*E. e. kubanensis* Laubmann), to which Ticehurst<sup>3</sup> would refer the inhabitants of Turkestan and the western Himalayas.<sup>4</sup>

<sup>1</sup>Bull. Brit. Orn. Cl., 46, p. 84, 1926.

<sup>2</sup>Verh. Orn. Ges. Bay., 12, p. 97, 1915.

<sup>3</sup>Journ. Bomb. Nat. Hist. Soc., 32, pp. 345-346, 1927.

<sup>4</sup>In his recently published review (Journ. Orn., 77, pp. 309-315, 1929), Stantschinsky likewise refers the birds of Turkestan and the western Himalayas to *E. e. roseata*.

**Montifringilla nivalis adamsi** Adams. Tibetan Snow Finch.

*Montifringilla adamsi* (Moore MS.) ADAMS, P. Z. S. Lond., 26, "1858," p. 482, pub. early in 1859—"barren mountains of Ladakh and Little Tibet."

LADAK: Fotu La (alt. 13,800 ft.), ♂ ♀ ad. ("breeding"), May 30, 1925.—Wing 110 mm.

Compared with specimens from the Caucasus and the Tian Shan (Narynsk<sup>1</sup>), this form is smaller in all its dimensions and has much less white on secondaries and upper wing coverts.

The Tibetan Snow Finch ranges from Ladak east through the Himalayas to Nepal, Sikkim, and southern Tibet, and has also been recorded from the Kukunor Mountains. It does not seem to occur either in Kashmir or Gilgit, nor is there any reason for including "Kashgar"<sup>2</sup> in its distributional area. Birds from the Turugart Pass (north of Kashgar)<sup>3</sup> and Kaskasu,<sup>4</sup> Sarikol-Pamir (west of Yarkand) are referable to *M. n. alpicola*, though Sharpe (p. 31), by mistake, recorded the latter locality under the heading of *M. adamsi*.

The single male from the Aksai Plateau, listed by Carruthers (Ibis, 1910, p. 447) as *M. adamsi*, also turns out to belong to *M. n. alpicola*, as I am informed by Mr. N. B. Kinnear, of the British Museum. Scully (p. 172) states that he obtained *M. adamsi* on the Chuchu Pass, above Sanju, in Hill Yarkand. The specimens, now in the Calcutta Museum, have been reexamined by Mr. Kinnear, who writes that they are nearest to *M. a. alpicola*, but differ by their pale fawn instead of grayish upper parts. They would seem to correspond to the description of *M. n. kwenlunensis* Bianchi<sup>5</sup>, which is said to range as far west as Tochtachon, north side of the Raskam Range. Parrot's record (p. 255) of *M. n. alpicola* from Polu, Keriya Range probably refers to the same form.

**Leucosticte nemoricola altaica** (Eversmann). Stoliczka's Mountain Finch.

<sup>1</sup>Birds from the central Tian Shan appear to me inseparable from *M. n. alpicola*, and if *M. n. groum-grzimaili* SARUDNY (Orn. Jahrb., 15, p. 215, 1904—Shin-shin-sha) is a valid form, it must be restricted to the northeastern range of that mountain system near the southern border of Dsungaria.

<sup>2</sup>As has been done by Sharpe (Cat. B. Brit. Mus., 12, p. 262) and Hartert (Vög. Pal. Fauna, 1, p. 134).

<sup>3</sup>An adult male collected by W. L. Abbott (see Richmond, p. 574) examined in the U. S. National Museum.

<sup>4</sup>Specimens collected by Stoliczka and Biddulph in the British Museum.

<sup>5</sup>Ann. Mus. Zool. Acad. Sci. St. Pétersb., 12, "1907," pp. 583, 588, Feb., 1908.

*Fringilla altaica* EVERSMANN, Bull. Soc. Natur. Moscou, 21, p. 223, 1848—Uimon, southern Altai.

KASHMIR: Baltal (alt. 9,700 ft.), ♂ ad., May 23, 1925.

This specimen as well as others from Kashmir and Ladak in the collection of the British Museum appear to be identical with a series from the Tian Shan.

This Finch, nearly related to *L. n. nemoricola* (Hodgson), is widely diffused in the mountain ranges of Central Asia (Altai, Tian Shan, Ferghana, Pamir) and the western Himalayas, from Gilgit east to Lahul and Spiti. In Garhwal and Kumaon it is said to intergrade with the typical form of the eastern Himalayas.

### *Leucosticte brandti pallidior* Bianchi. Bianchi's Mountain Finch.

*Leucosticte haematopygia pallidior* BIANCHI, Ann. Mus. Zool. Acad. Sci. St. Pétersb., 13, pp. 45, 55, July, 1908—northern Tibet and western Nan Shan; no type locality specified, we suggest as such Karasai, Russian Range.<sup>1</sup>

CHINESE TURKESTAN, HILL YARKAND: Sughet Karaul, two ♂♂ ad., June 27; Ayalik, Sanju River (alt. 13,000 ft.), four ♂♂ ad., two ♀♀ ad., one ♀ juv., July 2, 3, 1925.

Additional specimens.—Sughet Pass (alt. 16,000 ft.), ♂ ad., late July, 1893. W. L. Abbott (U. S. National Museum); Kufalong, south of Sughet Pass, ♂ ad., June 12, 1874. J. Biddulph (British Museum); Upper Karakash Valley, ♀ juv., October 12, 1873. J. Biddulph (British Museum); Khotan-tagh, ♂ ad., May (British Museum); Polu, Keriya Range, Kuenlun, ♀ ad., May 15, 1906. E. Zugmayer (Munich Museum); Karasai, Russian Range, Kuenlun, ♂ ad., May, 1890. M. W. Pewzow (Tring Museum); Altyn-tagh, south of Lob Nor, three ♂♂ ad., four ♀♀ ad., two ♀♀ imm., March and April, 1903, May 18, 19, 1909. R. Tancre's collectors (Tring and Munich Museum); Zaidam, two ♂♂ ad., December. Przewalski (British Museum).

The treatment of the races of *L. brandti* by authors has undergone many vicissitudes. Hartert<sup>2</sup> recognizes but one species with three geographical forms: *M. b. brandti*, *M. b. haematopygia*, and *M. b. walteri*. Bianchi, a few years later,<sup>3</sup> in addition to the newly discovered *L. margaritacea*, distinguishes *L. brandti*, *L. haematopygia*, *L. h. pallidior* (n. subsp.), and *L. h. walteri*; while the latest reviewer, Ernst Mayr,<sup>4</sup> regards them all as races of one "formenkreis." This

<sup>1</sup>First locality mentioned by Bianchi (p. 55). The Tring Museum has an adult male in worn breeding plumage from this place, received in exchange from the Leningrad Museum.

<sup>2</sup>Vög. Pal. Fauna, 1, pp. 137, 138, 1904.

<sup>3</sup>Ann. Mus. Zool. Acad. Sci. St. Pétersb., 13, pp. 52-56, 1908.

<sup>4</sup>Journ. Orn., 75, pp. 606-608, 1927.

arrangement marks a decided improvement upon all previous attempts of classification, and expresses the natural interrelationship of these birds in the most satisfactory way. My studies of very extensive material, however, tend to show that the ranges assigned to the various races require certain modifications, and that at least one additional form should be recognized.

Variation within the same form is slight. In fresh fall plumage the forepart of the crown is blacker, with narrow creamy-white apical edges which are gradually worn off as the season advances; the feathers of the mantle are laterally margined with buffy; and the pink edges on rump and lesser upper wing coverts are wider. In worn breeding garb the head is uniform brownish black; the back, owing to the loss of the buffy edges, looks more grayish or brownish, and the dusky central portion of the feathers becomes more prominent, producing sort of a dusky streaking; the pink edges on rump and wing coverts are narrower, brighter red, and more sharply defined; the white apical margins to the quills and rectrices have almost completely disappeared through wear. The only sexual difference consists in the females being slightly smaller and having a lesser amount of bright markings on wing coverts and rump, which, besides, are paler pink or even of various shades of yellow. I am able to recognize the following forms:

(a) *Leucosticte brandti brandti* Bonaparte.

*Leucosticte brandti* Bonaparte<sup>1</sup> was proposed as a new name for *Fringilla (Linaria) Gebleri* Brandt,<sup>2</sup> preoccupied by an earlier *F. (L.) gebleri* of the same author.<sup>3</sup> Brandt describes his bird as having the "dorsum, humerales superiores, uropygium, guttur, pectus et abdomen cum crisso albido-cinerea" and the "*tectricum alarum superiorum minores albo-cinerae, purpureo-cinnabarino vel subaurantio limbatae.*" This description can apply only to the Tian Shan form, in which the lesser upper wing coverts are always very conspicuously edged with pink, whereas the rump is either wholly uniform or shows but slight suggestions of pinkish apical fringes.<sup>4</sup> In fifty-seven (out of eighty-nine) specimens from the Tian Shan

<sup>1</sup>Consp. Av., 1, p. 537, 1850.

<sup>2</sup>Bull. Cl. Phys.-Mathém. Acad. Sci. St. Pétersb., 1, No. 23, p. 364, 1843—"Sibérie."

<sup>3</sup>Brandt, Bull. Scient. Acad. St. Pétersb., 10, Nos. 14-16 [=Nos. 230-232], p. 251, 1842—"Sibérie" [= *Leucosticte arctoa*].

<sup>4</sup>Laubmann's contrary statement (in Abhandl. Bayr. Ak. Wiss., Math.-phys. Kl., 26, No. 3, p. 58, 1913) is disproved by his own material examined in the present connection.

the rump is plain (unmarked), while the remaining thirty-two skins exhibit mere traces of pink margins to some of the uropygial feathers. These markings are, however, much narrower, paler, and less pronounced than in *L. b. pallidior*.

The range of *L. b. brandti* appears to be restricted to the central and northern Tian Shan, from the Alexander Range in the west to the Yulduz in the east, extending north to the Boro-khoro Mountains and south to the Kokshal-tau (north of Uchturfan). Breeding specimens have been examined from Sary-jass, Tishkan, Jarkent, Ara-bel, and the Issik-kul region.

(b) *Leucosticte brandti pallidior* Bianchi.

In the mountain chains along the southern border of the Tarim basin, *L. b. brandti* is represented by the closely allied, but well characterized *L. brandti pallidior* Bianchi. While similar in general coloration, it may immediately be recognized by having the uropygial feathers broadly margined with bright pink or salmon orange, and by the absence of the pink edges to the lesser upper wing coverts, which form such a striking feature in the Tian Shan race. In both respects, it agrees with *L. b. haematopygia*, but is very much paler throughout. The black of the pileum is much less extensive, being mainly restricted to the anterior crown and passing into dark brown posteriorly; the hind neck is hardly darker than the back; the dusky dorsal streaking is much narrower and paler brown; the cheeks, auriculars, and sides of neck are much paler brown, and the under parts likewise lighter, not streaked with dusky on the breast.

Bianchi (o. c., p. 55) gives the range of *L. b. pallidior* as stretching from Achan (Russian Range) east to the Nan Shan and Kukunor Range, but I am informed by Prof. Sushkin (in litt.) that birds from the two last named mountain chains constitute another (yet unnamed) local race.<sup>1</sup> In the west, however, the breeding area of *L. b. pallidior* is much more extensive, as I learn from my own investigations. The series obtained by the Simpson-Roosevelt Expedition in the Sughet Range at the head of the Sanju River as well as specimens secured by J. Biddulph at Kufalong and in the Upper Karakash Valley prove to be indistinguishable from toptotypical examples (Karasai, Russian Range; Khotan-tagh) and a series from the Altyn-tagh (south of Lob Nor) in the collections at Tring and Munich. A single adult bird (in breeding garb), taken by E. Zug-

<sup>1</sup>A single adult male from Nan Shan in the British Museum, collected in July by N. M. Przewalski, however, seems barely separable from *L. b. pallidior*.

mayer on June 15, 1906 at Polu, Keriya Range,<sup>1</sup> is likewise similar. The lesser wing coverts are, as a rule, quite uniform, only in a few specimens (two from Sughet Karaul, one from Ayalik, three from Altyn-tagh) are faint traces of pinkish or yellowish fringes discernible.

Bianchi's Mountain Finch was recorded both by Henderson and Hume (p. 262) from the Upper Karakash, and by Scully (p. 171) from Kichik Yailak and Tarbughoz, near Sanju Pass, under the erroneous name *M. haematopygia*, while Sharpe (p. 32) referred specimens secured by the Second Yarkand Mission at Karatagh Lake, on the Upper Karakash, to *M. brandti*, to which also Richmond (p. 574) assigned a single male taken by W. L. Abbott on the Sughet Pass.<sup>2</sup>

Its breeding range is thus seen to extend along the southern border of the Tarim basin from the Sughet Range and the Sanju Valley throughout the Khotan-tagh, Russian Range, and Altyn-tagh at least to the Tash-dawan, south of Lob Nor. In winter, it repairs even to western Zaidam, whence there are in the British Museum two perfectly typical adult males taken by N. M. Przewalski in December.

(c) *Leucosticte brandti pamirensis* Severtzow.

*Leucosticte pamirensis* SEVERTZOW, Ibis, (5), 1, p. 58, 1883—Pamir, restricted type locality Kysil-art Pass.<sup>3</sup>

Although Sharpe<sup>4</sup> took great pains in demonstrating the identity of *L. pamirensis* and *M. haematopygia* with *L. brandti*, and was supported in this view by Schalow (1901, pp. 442-443), careful study of the material in the British Museum tends to indicate that the mountain finches of the Pamir and Ferghana cannot well be united to any of the neighboring forms, and the late P. P. Sushkin, with whom I had corresponded on the subject, agreed with me that *L. b. pamirensis* was a valid race.

Birds from the Pamir (Kysil-art; Karakul; Tarbashi and Chahil

<sup>1</sup>Recorded as *M. brandti haematopygia* by Parrot (p. 254).

<sup>2</sup>Bianchi (o. c., p. 54), apparently without having seen any material, included all these localities in the range of *L. brandti*, and Mayr (Journ. Orn., 75, p. 607, 1927) evidently had them in mind, too, when assigning the "Westlichen Ausläufer des Kwenlun" to the distribution of that form.

<sup>3</sup>Severtzow's account of this and the allied species is fairly confused, and the matter given under No. 27, *Leucosticte brandti*, appears to have been accidently misplaced. These and numerous other deficiencies noticeable in Severtzow's paper are probably due to the many vicissitudes it had to undergo before being translated into English (see Ibis, 1883, note on p. 48).

<sup>4</sup>Cat. B. Brit. Mus., 12, pp. 270-271, 1888.

Gombaz, Sarikol) and Gilgit resemble *L. b. pallidior* in having distinct pink margins to the rump, but differ by the presence of narrow rosy edges to the lesser upper wing coverts, in which respect they form the transition to *L. b. brandti* of the Tian Shan. Certain examples, such as one (out of ten) from Gilgit, one (out of two) from Chahil Gombaz, and one from Tagdumbash Pamir (U. S. National Museum, No. 150276), however, lack the pinkish edging on the shoulders, and are barely distinguishable from *L. b. pallidior* of the Sughet Range. Compared to *L. b. brandti*, Gilgit and Pamir birds may be distinguished by the conspicuous pink (or orange yellowish) markings on the rump and narrower rosy apical edges to the lesser upper wing coverts. Specimens from the Alai and Ferghana Range generally have less pink suffusion on the rump, thus coming nearer to *brandti*.

According to material examined and information kindly supplied by the late Dr. P. P. Sushkin, the breeding range of *L. b. pamirensis* comprises the Pamir (including Sarikol and the Tagdumbash), the Alai, Transalai, the Ferghana, Zerafshan, and Hissar ranges, and the Chatkal-tau.<sup>1</sup> In winter it visits Gilgit.<sup>2</sup>

Specimens examined.—Gilgit 10.—Pamir: Tagdumbash 1 ♂ ad., April 28, 1894. W. L. Abbott; Chahil Gombaz, Sarikol, two ♂ ad., March 25, 26, 1874. J. Biddulph; Tarbashi, Sarikol, adult, March 23, 1874. F. Stoliczka (British Museum); Kysil-art Pass, ♂ ad., July 23. N. Severtzow (topotype of *L. pamirensis*); Karakul, ♂ ad., August; Kaplan-kul, ♀ imm., Oct. 5; ♂ imm., Dshudshale River, Nov. 2. Severtzow (all in British Museum); Kara-karyk, Alai, ♂ ♀ ad., June, 1893. Th. Barey (Berlepsch Collection).

(d) *Leucosticte brandti haematopygia* (Gould).

*Montifringilla haematopygia* GOULD, P. Z. S. Lond., 19, "1851," p. 115, pub. Apr. 29, 1853—"Tibet," coll. Lord Gifford, = Tso Morari Lake, Ladak (see Kinnear, Ibis, 1922, p. 519).

This form agrees with *L. b. pallidior* in having the uropygial feathers broadly margined with bright pink and in lacking the rosy edges to the lesser upper wing coverts, but is much darker throughout. The upper part of the head is more blackish; the hind neck

<sup>1</sup>References pertaining to *L. b. pamirensis* are as follows:

*Montifringilla brandti* SHARPE, Scient. Res. Second Yarkand Miss., Aves, p. 32, 1891—part, Tarbashi and Chahil Gombaz.—SCHALOW, Journ. Orn., 49, p. 442, 1901—Irkeshstan.—*Leucosticte brandti* PLESKE, Mém. Acad. Imp. Sci. St. Pétersb., (7th ser.), 36, No. 3, p. 16, 1888—Dougdan Pass and Iskander-kul, Chatkal-tau.—RICHMOND, Proc. U. S. Nat. Mus., 18, p. 574, 1896—part, Tagdumbash Pamir.—*Montifringilla brandti pamirensis* STOLZMANN, Bull. Soc. Imp. Natur. Moscou, nouv. sér., 11, p. 62, 1897—Kara-karyk, Ferghana (crit.).

<sup>2</sup>*Leucosticte brandti* BIDDULPH, Ibis, 1881, p. 88.

and nape much darker brown; the cheeks and auriculars decidedly blackish brown, the sides of the head very nearly as dark as the hind neck; the back much more broadly streaked with blackish brown; the under parts more brownish, with distinct, though narrow, dusky streaks on the breast.

Its range extends from eastern and southern Ladak<sup>1</sup> through Rupshu, Lahul, and Spiti east to Sikkim and southern Tibet. In Ladak it does not reach beyond the Karakoram, the most northerly locality whence specimens have been examined being the Sassir Pass. I have no means of determining the exact eastern limits of its distribution which, according to Sushkin (in litt.), stretches throughout eastern Tibet north to the sources of the Mekong and Yangtze-kiang and even to the eastern end of the Nan Shan (Yun-nan-chen, Tetung River).<sup>2</sup>

Worn summer specimens from Sikkim and Mount Everest look very much like a Ladak series in corresponding plumage, but comparison of birds in fresh autumn dress, which are not available from Ladak, may reveal some differences.

In addition to a large series from Sikkim and the Mount Everest region in the British Museum and twelve from Ladak in Col. Meinertzhagen's collection, I have examined six adults from Khardong, Gya, Sassir La, and Kazuri La, Ladak, collected by Dr. W. L. Abbott<sup>3</sup> in June and July, and kindly loaned by the authorities of the U. S. National Museum.

(e) *Leucosticte brandti walteri* (Hartert).

*Montifringilla brandti walteri* HARTERT, Vög. Pal. Fauna, 1, p. 138, 1904—Sung-pan, Süe Shan, Szechwan.

Very nearly related to *L. b. haematopygia*, but back, sides of head and neck even darker, more blackish brown; rump feathers but indistinctly tipped with pale pink; under parts much darker, hair brown with a tinge of drab, only the abdominal line and the under tail coverts margined with white.

<sup>1</sup>It is not found either in Kashmir or western Ladak. Both Hartert (Vögel Pal. Fauna, 1, p. 137, 1904) and Mayr (Journ. Orn., 75, p. 607, 1927) include Gilgit in its range, but birds from this country are by no means referable to *L. b. haematopygia*, as has already been pointed out by Kinnear (Ibis, 1922, pp. 519-520).

<sup>2</sup>*M. haematopygia* PLESKE, Bull. Acad. Sci. St. Pétersb., nouv. ser., 3, p. 121, 1892.—Laubmann (Abhandl. Bayr. Ak. Wiss., Math.-phys. Kl., 26, No. 3, p. 58, 1913) quite erroneously places Yun-nan-chen in the eastern Tian Shan, and refers Pleske's reference to *L. b. brandti*!

<sup>3</sup>Recorded as *Leucosticte brandti* by Richmond (p. 462) and Oberholser (p. 225).



This form appears to replace the preceding race in the alps of northern Szechwan. In addition to the type at Tring, I have seen three adults secured by H. Weigold at Dshiësongla, southwest of Tatsienlu, in the collections at Munich and Cambridge (Mass.).

(f) *Leucosticte brandti margaritacea* (Madarász).

*Montifringilla margaritacea* MADARÁSZ, Ornith. Monatsber., 12, p. 196, 1904—Katon-Karagai = Kotton-Karagai, Altai.

The last member of this group of mountain finches, which many ornithologists of the old school would doubtless separate specifically, is evidently more nearly related to *L. b. brandti* than to any other, but differs markedly by silvery gray (instead of blackish) forecrown, ashy gray (instead of dark brown) cheeks and auriculars, (silvery) gray under parts, broad light pink edges to axillaries and sides of breast, and pale reddish brown bill. The uropygial feathers show but short pink tips, while on the wing the median as well as the lesser coverts are margined with pale pink.

*L. b. margaritacea*, of which I have examined a fine adult male from the upper Sary-Dshamaty, south slope of Sailugem, inhabits the high mountains in northwestern Mongolia (Kotton-Karagai; Tarbagatai).

**Passer domesticus parkini** Whistler. Kashmir House Sparrow.

*Passer domesticus parkini* WHISTLER, Bull. Brit. Orn. Cl., 41, p. 13, 1920—Srinagar, Kashmir.

LADAK: Kargil (alt. 8,800 ft.), Dras River, ♂ ad., May 26; Panamik, Nubra, five ♂ ad., one ♀ ad., June 11, 12, 13, 1925.

Measurements of adult males.—Wing 78 (Kargil), 79, 82, 82, 82, 82; tail 58 (Kargil), 58, 60, 61, 62, 63.

These specimens agree with a series from the Vale of Kashmir and Baltistan. Compared with *P. d. indicus*, of the plains of India, they are larger in all dimensions, have heavier bills, and the males may, furthermore, be distinguished by the richer chestnut of the mantle and smaller wing coverts. The sides of the head are pure white, rarely tinged with pale grayish on the auriculars.

*P. d. parkini* is the breeding form of the House Sparrow throughout a large section of the Himalayas, ranging from Chitral to Spiti, Lahul, and probably as far east as Sikkim, and extending west into the mountainous parts of northern Baluchistan (Kalat, Quetta)

and Afghanistan (Kandahar).<sup>1</sup> It is largely migratory, and passes the winter in Punjab,<sup>2</sup> Sind,<sup>3</sup> and other parts of western India.

**Passer hispaniolensis transcaspicus** Tschusi. Tschusi's Spanish Sparrow.

*Passer hispaniolensis transcaspicus* TSCHUSI, Ornith. Monatsber., 10, p. 96, 1902—from Transcaucasia (Lenkoran) eastward; type locality Jelotan, Transcaspia (see Orn. Jahrb., 14, p. 10, 1903).

CHINESE TURKESTAN: Conishar, six mi. northeast of Aksu, four ♂♂ ad., one ♀ ad. (worn breeding plumage), Aug. 7, 1925.

The series agrees with Transcaspian specimens in corresponding plumage. The eastern race of the Spanish Sparrow is common in the Tarim basin up to the southern foot of the Tian Shan. Scully (p. 164) found it tolerably common at Yarkand, where it breeds in May and June. The Second Yarkand Mission, as recorded by Sharpe (p. 39), met with it at various localities in the plains of Kashgaria, and also secured two males at Chakmak, on the southern slope of the Tian Shan at an elevation of 8,800 feet.

It is widely diffused in the neighboring districts of Turkestan, Transcaspia, and northern Persia, wintering in Baluchistan, Mesopotamia, Sind, Punjab, and other parts of western India.

**Passer ammodendri stoliczkae** Hume. Stoliczka's Sparrow.

*Passer stoliczkae* HUME, Stray Feath., 2, p. 516, 1874—near Kashgar, Turkestan.

CHINESE TURKESTAN: Alager, Yarkand River, two ♂♂ ad., one ♀ ad. (breeding), one ♀ juv., July 20; Maralbashi, Kashgar River, ♂ juv., July 24, 1925.

These specimens are very nearly topotypical, and agree in every detail with others from Kashgar, coll. J. Biddulph, in the British Museum. From typical *P. a. ammodendri*, from Sir Darya and Ferghana, the males differ by sand color (instead of light grayish brown) upper parts, wholly unspotted rump and tail coverts as well as deeper ochraceous tawny postocular stripe. The female, too, is much more sandy above.

*P. a. stoliczkae* is peculiar to the Tarim basin and the Gobi desert, extending east to Ala Shan and Ordos, and north to the spurs of the eastern Tian Shan. It was discovered by Dr. F. Stoliczka and J. Biddulph, naturalists of the Second Yarkand Mission, in the

<sup>1</sup>Ticehurst, Journ. Bomb. Nat. Hist. Soc., 31, No. 4, pp. 865-6, 1927.

<sup>2</sup>Whistler, Ibis, 1922, p. 272.

<sup>3</sup>Ticehurst, Ibis, 1922, p. 650.

vicinity of Kashgar (see Sharpe, p. 39). Majev and Wilkins met with it near the Taushkan Darya at Uchturfan, at Jigda, and Djaitewe, along the southern base of the Kokshal-tau (Menzbier, p. 354). Pleske,<sup>1</sup> who was the first to properly discriminate between *stoliczkae* and *ammodendri*, records it from Hami and various localities in Bei Shan (eastern Tian Shan); and Oustalet, in the second part of his report on Bonvalot's and Prince d'Orléans's collections (p. 44), lists specimens from Chumtalla and Tikellik, situated on the Tarim, west of Lob Nor. Dr. W. L. Abbott, as recorded by Richmond (p. 575),<sup>2</sup> obtained specimens at the junction of the Aksu and Kashgar rivers and at Matan, forty miles south of Aksu, while Schalow (1901, p. 441) mentions a single male from Maralbashi, collected by Dr. Holderer.

**Passer montanus dilutus** Richmond. Kashgar Tree Sparrow.

*Passer montanus dilutus* RICHMOND, Proc. U. S. Nat. Mus., 18, p. 575, 1895—Kashgar, eastern Turkestan.

CHINESE TURKESTAN: Kashgar, six ♂♂ ad., eight ♀♀ ad., Oct. 5-12; Alager, Yarkand River, ♂♀ ad. (breeding), July 20, 21; Aksak-märal, ♀ ad. (breeding), July 22; Shamal, Yarkand River, ♂ ad. (breeding), July 23; Yaka-kuduk, ♂ ad. (molting), Sept. 22; Maralbashi, Yarkand River, ♀ ad., Sept. 27; Conishar (six miles northeast of Aksu), five ♂♂, one ♀ ad. (breeding), Aug. 7-9; Shatta, Tekes Valley, Tian Shan, ♂ ad., six ♂♂ juv., Aug. 23, 24, 1925.

In comparison with forty specimens from various parts of Europe, this series is very much paler throughout. The pileum is somewhat between fawn color and army brown instead of being deep sorghum brown; the back much brighter and more sandy; the lesser upper wing coverts lighter, less chestnut; the black gular patch less extensive; the sides and under tail coverts strongly tinged with buff; the chest with a hardly perceptible shade of grayish.

*P. m. dilutus* appears to find the center of its range in the Tarim basin. Henderson (p. 254) mentions it as abundant in the city of Yarkand; Scully (p. 165) lists it as common in the plains between Yarkand and Kashgar, and obtained breeding examples at Kisil Aghil, near Sanju. In the same region, at Kiwaz, it was also met with by the naturalists of the Second Yarkand Mission who, besides, procured specimens at Karghalik, Yangihissar, Kashgar, and Maralbashi (Sharpe, p. 37). Holderer's party, as recorded by

<sup>1</sup>Bull. Acad. Sci. St. Pétersb., nouv. sér., 3, p. 121, 1892.

<sup>2</sup>Richmond, while correctly distinguishing two races, erred in his nomenclature. The Ili-bird, named *P. a. timidus*, represents typical *P. a. ammodendri*, while those from eastern Turkestan belong to *P. a. stoliczkae*.

Schalow (1901, p. 440), collected the Tree Sparrow at various spots along the Kashgar Darya (Uksalur, Jangiabad, Kara-julgan), and Merzbacher (see Schalow, 1908, p. 203) forwarded specimens from Kashgar to the Munich Museum. Prince Orléans and Bonvalot, on their famous journey across Turkestan and Tibet, secured the Tree Sparrow in the plains around Kurla, near the Bagrash-kul, and again at Aktarma, on the banks of the lower Tarim toward Lob Nor, as we are told by Oustalet (p. 42). The specimens which we have examined in the Paris Museum are undoubtedly referable to the pale eastern race. How far its range extends in the east, however, cannot at present be indicated with any degree of accuracy. Birds from the Kukunor region are stated by Bangs and Peters<sup>1</sup> to belong to the Chinese *P. m. obscuratus* Jacobi.

In the north, *P. m. dilutus* stretches into the valleys of the Tian Shan. Birds from eastern Persia, Transcaspia, and Russian Turkestan are claimed by Snigirewski<sup>2</sup> to be separable as *P. m. pallidus* Sarudny.

### **Passer rutilans cinnamomeus** (Gould). Kashmir Cinnamon Sparrow.

*Pyrgita cinnamomea* GOULD, P. Z. S. Lond., 3, "1835," p. 185, pub. April, 1836—"apud montes Himalayenses."

*Passer rutilans debilis* HARTERT, Vög. Pal. Fauna, 1, p. 162, 1904—Sind Valley, Kashmir.

KASHMIR: Gund (alt. 7,000 ft.), one ♂ ad., two ♀ ♀ ad., May 21; above Gagan River Gorge, ♂ ad., May 23, 1925.

All of these specimens are strongly washed with yellowish underneath. Examination of the long series in the British Museum clearly shows that birds from Nepal, Sikkim, Bhutan, and southern Tibet are distinctly larger (wing 74-82) than those from Kumaon west to Kashmir, in which the length of the wing ranges from 69 to 74 mm. It appears, however, that Hartert, by naming *P. r. debilis*, has merely redescribed typical *cinnamomeus*, as has been pointed out by Kinnear (Ibis, 1922, p. 521) and Ticehurst,<sup>3</sup> and that it is the larger eastern form which requires a new name. It is very unfortunate that Hartert should have selected Bhutan as type locality for *P. cinnamomea*. Apart from the quasi impossibility of Gould receiving a bird from that region in 1835, the length of the wing, as

<sup>1</sup>Bull. Mus. Comp. Zool., 68, p. 377, 1928.

<sup>2</sup>Journ. Orn., 76, p. 591, 1928.

<sup>3</sup>Journ. Bomb. Nat. Hist. Soc., 32, No. 2, p. 347, 1927.

given in the original description ( $2\frac{3}{4}$  in.=70 mm.), clearly points to the small form of the western Himalayas.

The Kashmir Cinnamon Sparrow is well figured in Henderson and Hume's Lahore to Yarkand on pl. 25, facing p. 252.

### **Emberiza leucocephalos** S. G. Gmelin. Pine Bunting.

*Emberiza leucocephalos* S. G. GMELIN, Nov. Comm. Acad. Sci. Petrop., 15, p. 480, pl. 23, fig. 3, 1771—Astrakhan.

CHINESE TURKESTAN, TIAN SHAN: Ox-su, Tekes Valley, (♂) ad., Aug. 30; Tekes Valley, near mouth of Mointa River, ♀ ad., Sept. 9, 1925.

In both specimens, flight feathers and body plumage are in full molt, and this circumstance in conjunction with the date makes it almost certain that they had been breeding in the Tekes Valley.

Laubmann (p. 61) felt rather doubtful as to whether the Pine Bunting should be included among the breeding birds of the Tian Shan, although one of the specimens in the Merzbacher Collection had been taken in May in the Kunges Valley. Field Museum has a series of winter birds from Narynsk, Tian Shan.

*E. leucocephalos* is widely diffused throughout Siberia east to the Amur. In winter it migrates to northwestern India, Baluchistan, and neighboring countries.

### **Emberiza buchanani** Blyth. Gray-necked Bunting.

*Emberiza buchanani* BLYTH, Journ. Asiat. Soc. Beng., 13, (2), p. 957, 1844—based on a drawing by Buchanan Hamilton, Indian Peninsula.<sup>1</sup>

CHINESE TURKESTAN, TIAN SHAN: Ox-su, Tekes Valley ♂ ad., Aug. 29; Simtash, ♀ ad., Aug. 31; Agijas, ♀ (first winter?), Sept. 2, 1925.

The adult birds, in exceedingly fresh fall plumage, I am unable to distinguish by any character from the numerous winter specimens from India, with which they have been compared in the collection of the British Museum, although the female is somewhat browner and more heavily marked above than the average. It would seem, therefore, that Sarudny and Korejew, in describing *E. buchanani* var. *obscura*,<sup>2</sup> have merely renamed typical *E. buchanani*, based on a

<sup>1</sup>There is absolutely no reason to supplant the above specific name by the later *Euspiza Huttoni* BLYTH (Journ. Asiat. Soc. Beng., 18, (2), p. 811, 1850—Afghanistan), as has recently been proposed by BAKER (Faun. Brit. India, Birds, 3, new ed., pp. 208-9, 1926). Blyth's description of *E. buchanani* is unmistakable, and his later assertion that it was the same as *E. hortulana* was unfounded, as has been shown long ago by Hume (Stray Feathers, 7, p. 150, 1878). See also Ticehurst, Journ. Bomb. Nat. Hist. Soc., 32, No. 2, p. 348, 1927.

<sup>2</sup>Ornith. Monatsber., 11, p. 130, 1903—Semiretchje Region, Turkestan.

specimen taken in India. If there are really two forms, which is rather questionable, it is the one from Persia that should be provided with a separate name.

The specimen from Agijas differs from adult females by much paler (pinkish buff instead of pinkish cinnamon) under parts, with the much broader blackish streaks on the chest extending on to the lower throat, and by lacking the yellow color on the throat. The bill is reddish as in the adults, but the edges to the wing coverts are paler. Neither the British Museum nor the Tring collection has a similar example, and I am inclined to take it for a female in first winter dress.

*E. buchanani*, though widely distributed between the Caspian Sea and the Altai, appears to be rather rare in the Tian Shan. According to Smallbones (p. 417), a single male was obtained by Almásy in August, 1900 at Ajuk-Tasez; Gyldenstolpe (p. 11) lists two males, and Kollibay (1916, p. 596) a female, all taken at Narynsk in June, 1910, while Laubmann (p. 62) records the species as rarely breeding in the Naryn Valley. It is apparently absent from the Tarim basin, though a single specimen was taken by the Second Yarkand Mission (Sharpe, p. 47) near Ighiz Yar, west of Yarkand, in Sarikol, on May 18, 1874.

### **Emberiza cia stracheyi** Moore. Eastern Meadow Bunting.

*Emberiza stracheyi* MOORE, P. Z. S. Lond., 23, "1855," p. 215, pl. 112, pub. Feb., 1856—Kumaon.

KASHMIR: Gund (alt. 7,000 ft.), ♂ ad., May 21; Baltal (alt. 9,500 ft.), two ♂♂ ad., May 22, 23, 1925.

LADAK: Matayan (alt. 11,000 ft.), ♀ ad., May 25, 1925.

While not quite so dark as birds from the Simla Hills and Kumaon, the Meadow Buntings of Kashmir and Ladak are much deeper rufous both above and below than *E. cia par* Hart., from Turkestan and Transcaspia, although certain specimens in worn condition approach it very closely. Reexamination shows the two specimens from Lamayuru, referred by Oberholser (p. 224) to *E. cia*, to be bleached breeding birds of the present form.

*E. cia stracheyi* is stated to be common throughout Kashmir, and stretches into western Ladak, where it is notably found in the Dras and Suru valleys (Matayan, Moulbekh, Bod Kharbu, Kargil),<sup>1</sup> being very rare, however, in the Indus Valley and toward Leh.<sup>2</sup>

<sup>1</sup>See Wathen (Journ. Bomb. Nat. Hist. Soc., 29, p. 700, 1923) and Osmaston (op. cit., 31, p. 998, 1927).

<sup>2</sup>Meinertzhagen, Ibis, 1927, p. 394.

Birds from Gilgit, Chitral, and the Kaghan Valley seem to be intermediate between *E. c. stracheyi* and *E. c. par*, though nearer the latter. Abbott obtained specimens of this form in winter in Baltistan (Richmond, p. 465, s. n. *E. cia*).

***Emberiza pyrrhuloides centralasiae* Hartert.** Tarim Thick-billed Reed Bunting.

*Emberiza pyrrhuloides centralasiae* HARTERT, Vögel Pal. Fauna, 1, p. 199, 1904—Maralbashi, Turkestan (type in British Museum examined).

CHINESE TURKESTAN: Maralbashi, Kashgar River, three ♂♂ ad. (completing annual molt), one ♂ juv., Sept. 27, July 26, 1925.

Additional specimens.—Maralbashi: two ♂♂ ad. (including the type), one ♀ ad., January, 1874. J. Biddulph (British Museum); Jungle east of Maralbashi, ♂ ad., ♀ ad., Feb. 1, 1894. W. L. Abbott (U. S. National Museum); Jungle upon Kashgar River, ninety miles east of Maralbashi, ♂ ad., Dec. 5, 1893. W. L. Abbott (U. S. National Museum); junction of Aksu and Kashgar rivers, two ♀♀ ad., Nov. 29, Dec. 2, 1893. W. L. Abbott (U. S. National Museum); Kashgar, adult, Jan. 31, 1874. F. Stoliczka, No. 1283; Yarkand, three ♂♂ ad., May 24, 1874. J. Biddulph and F. Stoliczka (No. 1781) (British Museum).

Wing of adult males.—91, 87 (type), 85, 85, 83, 83, 83, 81, 81.

This series unquestionably represents a single form, closely similar to *E. p. pyrrhuloides*, from the shores of the Caspian Sea, but differing by its smaller, less swollen bill. There is, however, much individual variation in the size of this organ, and while in the majority the bill is very nearly as small as in the type specimen or even slightly smaller, a few birds, especially a couple from the jungle east of Maralbashi (U. S. National Museum, Nos. 150317-18), can hardly be told from *pyrrhuloides* on this score. Color differences do not seem to exist between the two races, though it must be admitted that the series of typical *pyrrhuloides* available for comparison is rather unsatisfactory. Dimensions vary a great deal, and the largest examples from eastern Turkestan attain the size of *pyrrhuloides*. The supposition that these large, thick-billed birds might be migratory visitors from other parts of Central Asia hardly needs consideration in view of the peculiar situation of the Tarim basin, surrounded as it is on three sides by lofty mountain ranges which are not likely to offer suitable haunts for these birds frequenting reeds and swamps. I am, therefore, inclined to attribute the difference in size to individual variation of the Tarim form.

*E. p. centralasiae* is, as far as our present knowledge goes, known only from the Tarim basin,<sup>1</sup> where it is reported to be a resident.

Scully (p. 166) found it in February and April on the edges of marshy ground and rice fields in Yarkand and vicinity. The Second Yarkand Mission, as recorded by Sharpe (p. 44), obtained specimens at Maralbashi (one of which became the type of *E. p. centralasiae*) and Kashgar in January, and others in May at Yarkand, where Stoliczka took several nests with eggs. Dr. W. L. Abbott, according to Richmond (p. 577), secured this Reed Bunting on the Kashgar River east of Maralbashi in the winter of 1893-94, while Oustalet, in his report on the collections of Bonvalot and Prince Orléans (p. 19), lists it from Chunkul, near Kurla, and from Arkan, north of Chaklik, toward Lob Nor. One of our specimens, taken on July 26, at Maralbashi is in juvenile plumage, with dusky spots on the breast; while the three adults (September 27) are just completing their annual molt.

Owing to lack of sufficient material, the relations of *E. p. härmsi* (Sarudny)<sup>2</sup> and *E. p. harterti* Sushkin<sup>3</sup> to *E. p. centralasiae* cannot at present be ascertained.

Stresemann<sup>4</sup> is probably right in considering *E. pyrrhuloides* as conspecific with *E. schoeniclus*, but our knowledge of the breeding ranges of the various forms of Reed Bunting seems hardly complete enough to admit of final decision.

### ***Calandrella brachydactyla dukhunensis* (Sykes). Rufous Short-toed Lark.**

*Alda Dukhunensis* SYKES, Proc. Comm. Sci. Corresp. Zool. Soc. Lond., 2, p. 93, July 31, 1832—Dukhun, India.

CHINESE TURKESTAN, TIAN SHAN: Agijas, Tekes Valley, ♂ ad., Sept. 2, 1925—Wing 96; tail 62.

On carefully comparing this specimen with the material in the British Museum, I cannot but refer it to *C. b. dukhunensis*, although I am well aware that the locality is rather unusual for this form. The bird—in perfectly fresh fall plumage—is much more buffy above than specimens in similar condition of *C. b. longipennis* from Turgai (Irgis River) and western Turkestan (Karakol, Oxus River; thirty miles southeast of Bokhara, etc.). On the other hand, it is

<sup>1</sup>Hartert (Vög. Pal. Fauna, 1, p. 199) extends its range east to Zaidam, Ala Shan, and Kara-ussu, N. W. Mongolia. Birds from the last-named locality are, however, likely to belong to some other form.

<sup>2</sup>Ornith. Monatsber., 19, p. 72, 1911—Sir Darya, Turkestan.

<sup>3</sup>Bull. Brit. Orn. Cl., 16, p. 56, 1906—Zaissan Nor, Semipalatinsk.

<sup>4</sup>Ornith. Monatsber., 33, p. 90, 1925.



not distinguishable from certain examples from southern Tibet, which Kinnear—no doubt correctly—assigns to *dukhunensis*, particularly an adult male taken by Wollaston on September 17, 1921, on the east side of Mount Everest (No. 365),<sup>1</sup> which is an exact duplicate of our bird as regards coloration of upper parts and chest. It must be admitted, however, that the Mt. Everest bird is the palest of the lot in the British Museum, all the other specimens from Gyantse and Sikkim as well as those taken in winter in the Indian plains being slightly more reddish above and more strongly shaded with rufescent across the chest.

According to Bianchi,<sup>2</sup> *C. b. dukhunensis* breeds in northeastern Tibet, from Ala Shan and Zaidam south to the Burchan Budda Range, whereas the breeding area of *C. b. longipennis* is stated to extend as far east as Kobdo, in Mongolia,<sup>3</sup> and Urumchi, at the northern base of eastern Tian Shan, in Dsungaria. Unless our specimen was already on migration, *C. b. dukhunensis* would seem, however, to range much farther west than was hitherto admitted.

**Calandrella acutirostris acutirostris** Hume. Hume's Short-toed Lark.

*Calandrella acutirostris* HUME in Henderson and Hume, Lahore to Yarkand, p. 265, 1873—Balakchi, upper Karakash, Sughet Range (type in British Museum examined).

LADAK: Matayan, Gumber River (alt. 11,000 ft.), ♂ ad., May 25; Panamik, Nubra, three ♂♂ ad., one ♀ ad., June 11, 13, 1925.

CHINESE TURKESTAN, HILL YARKAND: Sughet Karaul, upper Karakash (alt. 12,600 ft.), three ♂♂ ad., June 27, 1925.

Authors differ as to the proper identification of the Short-toed Larks from Ladak. While Osmaston (Ibis, 1925, p. 703; 1926, p. 447) and Meinertzhagen (Ibis, 1927, p. 395) refer them to *C. a. tibetana*, Ticehurst (Ibis, 1926, p. 233) claims they belong to *C. a. acutirostris*, and quite recently Ludlow (Ibis, 1928, p. 72), on Ticehurst's authority, declares the two races to be inseparable.

*C. acutirostris* was originally based on a single example obtained on August 5, 1870 by George Henderson at Balakchi, in the upper Karakash Valley, just north of Sughet Pass, in Hill Yarkand. Our

<sup>1</sup>Kinnear, Ibis, 1922, p. 518.

<sup>2</sup>Wiss. Res. Reisen Przewalski, 2, Birds, Part 4, p. 290, 1905.

<sup>3</sup>Sushkin (List and Distribution of Birds Russ. Altai and N. W. Mongolia, p. 67, 1925), however, separates the birds from the Altai Mts. and N. W. Mongolia as *C. b. orientalis*. His description does not fit the Agijas bird in so far as the under parts are stated to be more whitish (than in *C. b. brachydactyla*), washed with brownish gray on chest and sides.

specimens from Sughet Karaul are, therefore, topotypical. In proportions of the four outer primaries (which are nearly equal in length), general coloration, extent of white on the outermost rectrix, and dimensions, they agree with the type and other examples collected by Scully at Balakchi, in the British Museum. The type has an abnormally slender bill with very acute tip—doubtless a mere deformity.

On comparing eight adults from the Sughet Range with a long series of *C. tibetana* Brooks,<sup>1</sup> including the type, from Sikkim and southern Tibet (Mt. Everest region), I fail to see any constant difference in the extent of the white area on the outer tail feather, which seems to vary within the same limits in the two series. Whether other color distinctions exist, is hard to say, as no fresh autumn specimens from the Sughet Range (*acutirostris*) are available. Breeding birds from the Mt. Everest region are certainly indistinguishable in coloration from those in corresponding plumage taken in the Karakash Valley. There is, however, a possibility that the maximum wing measurement is slightly greater in Sikkim and Tibetan birds<sup>2</sup> which have wings of from 92 to 99, the majority being around 95, the type of *C. tibetana* measuring 92 mm.; whereas the figures for the Sughet specimens (*C. acutirostris*) run from 92 to 95 mm. This trifling average difference, which is likely to disappear in a larger series, seems hardly sufficient to maintain the distinction of *tibetana*, as understood by British ornithologists.<sup>3</sup>

Birds from Ladak are on average even smaller than the Sughet birds. This is especially noticeable in specimens from the Nubra Valley and Matayan (wing of males 88-90), while others from the Indus Valley (Basgo and Leh), in length of wing (91-93), very nearly attain the measurements of the Sughet series. Whistler (Ibis, 1923, p. 622), however, gives the wing for five males from Spiti as ranging from 89 to 95 mm., which seems to indicate a certain amount of individual variation within the same locality.

I do not perceive any constant color differences in the Ladak

<sup>1</sup>Stray Feathers, 8, No. 6, "1879," p. 488, after March 23, 1880—Tibet, beyond Sikkim.

<sup>2</sup>In this connection it may be stated that the lark collected by Zugmayer near Rudok, in western Tibet, not far from the Indian frontier, and recorded as *C. brachydactyla dukhunensis* by Parrot (p. 258), on reexamination turned out to be referable to "*C. tibetana*" (wing 97).

<sup>3</sup>Birds from northeastern Tibet (Humboldt Range, Kukunor), however, may be separable, as claimed by Bianchi (Wiss. Res. Reisen Przewalski, 2, Birds, Part 4, pp. 288, 296, 1905), for a single specimen obtained by Donaldson Smith in Mongolia has much more white on the external tail feather than any other "*C. acutirostris*" or "*C. tibetana*" we have seen.

birds, and refer them without hesitation to *C. a. acutirostris*, to which three breeding females from the Tagdumbash Pamir likewise belong.

The breeding area of *C. a. acutirostris* thus extends from Baltistan and Ladak throughout the Himalayas and southern Tibet east to Sikkim, at elevations of 8,000 ft. and upwards. It is apparently not found in Kashmir proper, but stretches north to the Kuenlun (Karakash Valley) and thence west to the Pamir,<sup>1</sup> northern Baluchistan,<sup>2</sup> and Russian Turkestan.<sup>3</sup>

***Calandrella rufescens seebohmi* (Sharpe). Seebohm's Sand Lark.**

*Alaudula seebohmi* SHARPE, Cat. B. Brit. Mus., 13, p. 590, 1890—"from Yarkand and Kashgar to Mongolia," no type locality specified (the type is from Turkestan, coll. Severtzow).

CHINESE TURKESTAN: Lailik-ötang, Yarkand River, ♀ ad. (worn breeding plumage), July 18; Charshamba Bazar, Yarkand River, ♀ (juvenile plumage), July 19, 1925.

The adult bird agrees with breeding specimens obtained by Scully near Yarkand and Karghalik, while the type, taken in April, is in better (less worn) plumage.

*C. r. seebohmi* may be distinguished from the other Asiatic races by its decidedly sand-colored upper parts. It breeds in the Tarim basin, but the eastern limits of its range cannot at present be given with any degree of accuracy.<sup>4</sup> Scully (p. 173) met with it in June near Yarkand, and in August at various localities in the vicinity of Karghalik. The Second Yarkand Mission, as recorded by Sharpe (p. 54), obtained it throughout the year in the plains of Kashgaria, securing specimens in the breeding season in the Karakash Valley and at Kugiar. Menzbier (p. 354) lists what is evidently the present

<sup>1</sup>Recorded by Richmond (p. 579) from the Tagdumbash Pamir; by Sharpe (p. 54) from Sarikol; by Bianchi [(Wiss. Res. Reisen Przewalski, 2, Birds, Part 4, p. 286, 1905) from the Alichur and Akbaital Pamirs.

<sup>2</sup>In the Kalat and Quetta districts, according to Ticehurst (Journ. Bomb. Nat. Hist. Soc., 31, p. 875, 1927; o. c., 32, p. 353, 1927).

<sup>3</sup>Severtzow obtained breeding birds on the Badam River, Talas-tau, and on an affluent of the Chir-chik River, Chatkal-tau, east of Tashkent, in the westernmost spurs of the Tian Shan (see Bianchi, o. c., p. 286).

<sup>4</sup>Bianchi (Wiss. Res. Reisen Przewalski, 2, Birds, Part 4, pp. 322-328, 1905) extends it east to Ala Shan and the sources of the Hwang Ho, but he very likely included more than one form under *Alaudula seebohmi*, since birds from the eastern Gobi and adjacent districts appear to be smaller with slenderer bills, and are probably referable to *C. r. cheleensis* (Swinhoe). If they were all the same, *A. kukunooorensis* Przewalski, 1876, would have priority, provided that Bianchi is right in declaring the type to be an individual variant of the Sand Lark of northeastern Tibet.

form under the name "*Alaudula leucophaea*" from Kara-Khodja and Jaman-su; Richmond (p. 579) reports on specimens collected by W. L. Abbott on the south slope of the Tian Shan north of Kashgar, and at Karatol, 35 miles south of Aksu; Prince Orléans's party, as recorded by Oustalet (p. 16), met with it at the southern base of the Tian Shan early in October, 1889, and Schalow (1901, p. 447) mentions a single bird from Kara-julgan, erroneously referring it to *A. cheleensis*. Other localities in the Tarim basin are indicated by Bianchi.

I doubt whether this Lark is found anywhere west of the Pamir, and would suggest that the breeding record from Kushdil Khan, British Baluchistan,<sup>1</sup> is more likely to belong to *C. r. seistanica*, which is not always easily distinguishable, particularly in worn plumage.

### **Galerida cristata magna** Hume. Hume's Crested Lark.

*Galerida magna* HUME, Ibis, (3), 1, p. 407, 1871—"collected during the Yarkand Expedition"; the type is from Yarkand (see Lahore to Yarkand, p. 270, pl. 30).

CHINESE TURKESTAN, YARKAND: Echitgo (Carshamba Bazar), Yarkand River, ♂ ad. (breeding), July 16; Abad Charshamba Bazar, ♀ juv., July 19; Shamal, near Maralbashi, two ♂♂ ad., one ♂ juv., July 22; Yaka-kuduk, near Aksu, two ♂♂ ad., Sept. 22, 1925.

The series is topotypical. The type and other specimens from the Yarkand plains in the British Museum are similar.

This large sand-colored race of the Crested Lark finds the center of its distribution in the Tarim basin, ranging east to the Lob Nor. According to Scully (p. 175), it is one of the commonest birds in the plains of Kashgaria, where it is a permanent resident. The Second Yarkand Mission, as reported by Sharpe (p. 55), obtained it at various localities in the plains of Kashgar and Yarkand as well as at Sanju, in the foothills of the Kuenlun, at an elevation of about 6,000 ft., where it appears to breed, since Richmond (p. 580) lists two birds, including a young one, taken by W. L. Abbott early in August, 1893 at Kilian (alt. 6,000 ft.), somewhat farther west in the same region. Schalow (1901, p. 447) records a single bird from Jandaman, east of Kashgar, on the Kashgar River. In the north, *G. c. magna* reaches into the southern foothills of the Tian Shan, whence specimens were sent to Prof. Menzbier (p. 354) from near Kara-Khodja and from the Uital River, while Laubmann (p. 66) examined one from the lower South Musart River.

<sup>1</sup>See Ticehurst, Journ. Bomb. Nat. Hist. Soc., 31, No. 4, p. 875, 1927.

*G. c. magna* is, furthermore, known to inhabit the N. W. Frontier Province, northern Baluchistan, and parts of Persia, but where it meets *G. c. vamberyi* Härms, described from Uch-Ajji in the Karakum Desert, Transcaspiia, remains to be ascertained. North of the main range of the Tian Shan and in western Turkestan (Tashkent, Chinaz) it is replaced by the barely separable *G. c. iwanowi* Loudon; in Gilgit, the adjoining section of the Indus Valley, and in Hazara, by the grayer *G. c. lynesii* Whistler.<sup>1</sup>

### *Alauda arvensis guttata* Brooks. Kashmir Skylark.

*Alauda guttata* BROOKS, Journ. Asiat. Soc. Beng., 41, (2), p. 85, 1872—  
"the common Skylark of the Kashmir plains."

KASHMIR: Sonamarg, ♂ ad., May 23, 1925.—Wing 100 mm.

Compared and found identical with Brooks's original series from Srinagar in the British Museum. Birds from Gilgit of which, however, only one is in comparable plumage (May) appear to be also referable to *A. a. guttata*, although some specimens closely approach *A. a. lhamarum*.

This is the only skylark breeding in Kashmir and Gilgit. W. L. Abbott's birds from Kashmir, at least those secured in the breeding season, recorded by Richmond (p. 467) as *A. a. intermedia*, and the specimens obtained by the Second Yarkand Mission at Sopur, Srinagar and Sonamarg and referred to *A. liopus* by Sharpe (p. 53), doubtless belong to the present form.

I agree with Hartert<sup>2</sup> that there is no reason for specific separation of the *gulgula* group (with short wing tip) from the true skylarks.

### *Alauda arvensis lhamarum* Meinertzhagen. Ladak Skylark.

*Alauda arvensis lhamarum* MEINERTZHAGEN, Bull. Brit. Orn. Cl., 46, p. 100, 1926—Ladak.

LADAK: Leh, three ♂♂, two ♀♀ ad. (nesting), June 3-5; Panamik, Nubra (alt. 10,600 ft.), one ♂, two ♀♀ ad., June 11, 1925.

This form, depicted under the inapplicable name *A. triborhyncha* on pl. 28 in "Lahore to Yarkand," comes very near to *A. a. guttata*, of Kashmir, which it resembles in short wing tip; but as pointed out by Meinertzhagen, in breeding plumage it is paler, less fulvous above, and the rufescent tinge across the chest is less extensive as well as paler in color. However, one of the males from Leh runs very close to the Kashmir race.

<sup>1</sup>Bull. Brit. Orn. Cl., 49, p. 52, 1928—Gilgit Valley.

<sup>2</sup>Abhandl. Ber. Zool. Anthr.-Ethnogr. Mus. Dresden, 15, No. 3, p. 19, 1922.

*A. a. lhamarum* is widely diffused throughout the cultivated parts of Ladak, from the Dras Valley east to Pangong Lake, and north to Nubra.

It was recorded from Ladak by Hume (p. 268); from Leh and Tankse by Sharpe (p. 55, *A. leiopus*); from Leh by Richmond (p. 467, *A. a. intermedia*); from Shushot, Indus Valley, by Oberholser (p. 219, *A. a. leiopus*); from the upper Indus Valley and below Leh by Ludlow (p. 145, *A. a. cinerea*); from Dras and near Leh by Wathen (p. 701, *A. gulgula guttata*).

The Skylarks found by Whistler<sup>1</sup> in the Chandra Valley, Lahul, probably belong to the present form.<sup>2</sup>

### *Alauda arvensis intermedia* Swinhoe. Eastern Skylark.

*Alauda arvensis* SWINHOE, P. Z. S. Lond., 1863, p. 89—Shanghai, China.

CHINESE TURKESTAN: Ox-su, Tekes Valley, Tian Shan, three ♀♀ ad., one ♂ juv. (molting), Aug. 29; Shurbulak Pass, Pamir, west of Kashgar, three ♂♂, Nov. 1, 1925.—Wing of adult males (Shurbulak Pass) 106, 112, 117.

The Ox-su birds are in full molt, and the male is just passing from the juvenile into the first winter plumage. They are very different from the Indian races (*gulgula* group) by reason of their much more spotted chest and longer wing tip, and with the possible exception of very slightly browner upper parts, are not distinguishable from those taken at Shurbulak. It appears, therefore, that the Skylark, breeding in the valleys of the central Tian Shan, belong to the Siberian form, so common in the Indian plains in winter, which, as pointed out by Ticehurst (*Ibis*, 1922, p. 149), is entitled to the name *A. a. dulcivox* Brooks. More recently, however, Hartert<sup>3</sup> has shown that there is but one rather variable race of skylark ranging all over northern Asia from western Siberia to the Amur and wintering in India and China. Its earliest name is the one given by Swinhoe, while *dulcivox* Brooks and *cinerascens* Ehmcke become synonyms.

The Skylark has been listed by Severtzow (1875, p. 175) among the breeding birds of the central Tian Shan (Issik-kul, Naryn Valley). Lönnberg (1905, p. 18) records a male in worn breeding dress

<sup>1</sup>*Ibis*, 1925, p. 193 (*A. arvensis intermedia*).

<sup>2</sup>Oberholser (p. 220) sought to revive the name *A. leiopus*, taking it from Hume (*Stray Feathers*, 1, p. 40, 1873), who had used it rather vaguely for the skylarks "from Ladak, Thibet, and the higher Himalayan plateau generally." Whatever may be decided about the acceptability of the term *leiopus* HUME, it does not affect *guttata* BROOKS, this form being restricted to Kashmir on the other side of the Great Himalayan Range.

<sup>3</sup>Abh. Ber. Zool. Anthr.-Ethnolog. Mus. Dresden, 15, No. 3, p. 19, 1922.

from Baimgol River, a tributary of the Tekes, s. n. *A. a. cantarella*, and Kollibay (1916, p. 597) describes a young bird and a clutch of eggs from Narynsk.

#### The Horned Larks.

Identification of the skins in the Roosevelt Collection led to a complete revision of the Himalayan and South Turkestan forms. Besides the material in the U. S. National Museum, including Oberholser's types which had never been critically examined before, and several important specimens in the Paris Museum, I had the advantage of studying the large series in the British Museum as well as those at Tring and in Col. Meinertzhagen's private collection, while Mr. Outram Bangs kindly placed the rich Chinese material of the Museum of Comparative Zoology, Cambridge, Mass., at my disposition.

Before discussing the three races represented in the collection, a few general remarks about the distribution and plumages of the Horned Larks may be appropriate. During the breeding season, the Horned Larks of Central Asia are restricted to the Temperate Zone of the mountains, and are seldom found below 6,000 feet, the center of their habitat being between 10,000 and 15,000 feet. In the fall they desert the elevated regions, and repair to the valleys and plains where they spend all winter and the early part of spring. I am inclined to agree with Hartert, Meinertzhagen, and other recent authorities in considering all the numerous "species" and "sub-species" of Horned Larks in both hemispheres as geographical races of one "formenkreis." As far as the mountain chains bounding the southern border of the Tarim basin are concerned, certainly not more than one form breeds in any one district, and it seems extremely unlikely that the presence or absence of a connection between the black jugular band and the black area on the sides of the head—the principal character used by Bianchi for splitting the Horned Larks into several specific groups—is of more than racial value. In all of the forms breeding from Kashmir east through the Himalayas to Tibet and western China, there is a distinct white gap on the sides of the neck, and it is not until we reach the Tagdumbash Pamir in the west that we meet with a race in which the two black areas join each other without interruption. According to Bianchi and Sushkin (in litt.), however, representatives of both types co-exist during the breeding season in certain mountain ranges of Russian Turkestan. Dr. Sushkin (in litt.) claims that *C. penicillatus albigula* and *C. brandti montanus* (which he calls a very poor form,

hardly distinguishable from *brandti*) breed together in the Russian Pamir, Alai, Transalai, and Tian Shan, and that "the evidence is as complete as possible, birds of both types being killed at the same day and on the same small lake," as shown by the material in the Leningrad Museum. Still I hesitate to accept this as a definite proof of their specific distinctness, since both Bianchi and Sushkin admit the occurrence of so-called "hybrids" between the two alleged species. I venture to suggest as a more plausible explanation that the extent of the black area might be a variable feature in certain races, whereas in others like *longirostris*, *argaleus*, *elwesi*, *teleschowi*, *khamensis*, etc. it has become an absolutely constant character.

For comparative purposes, specimens taken immediately after completing their annual molt in August and September are preferable to any others, but are not always available. In worn plumage, the vinaceous tinge on the hind crown and nape is deeper, the dusky streaking of the back becomes more pronounced, and the pale edges to the black of the crown, cheeks, and jugular band almost completely disappear through wear. In making comparisons between different forms, care must be taken to use specimens in corresponding plumage.

### *Chionophilos*<sup>1</sup> *alpestris longirostris* (Moore). Long-billed Horned Lark.

*Otocoris longirostris* (Gould MS.) MOORE, P. Z. S. Lond., 23, "1855," p. 215, pl. 111, pub. Feb., 1856—"neighborhood of Agra," errore; the types examined in the British Museum were obtained by Major Hay in Kulu.

LADAK: Fotu La (alt. 1,800 ft.), ♂ ad., May 23, 1925.

The Horned Larks of Ladak have lately been much discussed. Osmaston<sup>2</sup> maintains that *C. a. elwesi* is the common species throughout that country except in the extreme west along the slopes of the Great Himalayan Range, where (as well as in the Pir Panjal Range in Kashmir) it is replaced by *C. a. longirostris*. Ticehurst<sup>3</sup> gives the range of *elwesi* as extending as far west as the Tso Kar, Tso Morari, and Pangong Lakes in Ladak and north to Aktagh, north of the Karakoram Pass, while *longirostris*, according to his conception, inhabits Spiti, Lahul, Kulu, and the rest of Ladak, except the Deosai

<sup>1</sup>*Chionophilos* (PETÉNYI in litt.) BREHM (Handb. Liebh. Stuben- und Hausvögel, p. 296, 1832—type by monotypy *Alauda alpestris* LINNAEUS) has priority over *Otocoris* BONAPARTE, 1838. See Laubmann, Verh. Orn. Ges. Bay., 15, p. 222, 1922.

<sup>2</sup>Ibis, 1925, pp. 702, 703; 1926, p. 447; Journ. Bomb. Nat. Hist. Soc., 32, pp. 135, 136, 1927.

<sup>3</sup>Ibis, 1926, p. 233; Journ. Bomb. Nat. Hist. Soc., 32, p. 352, 1927.



Plain. Meinertzhagen (Ibis, 1927, pp. 400-402) separates the birds of the Deosai Plateau as *C. a. deosai*, and includes the rest of Ladak in the range of *C. a. longirostris*, pointing out at the same time that specimens from eastern Ladak are variously intermediate to *C. a. elwesi*. With this disposition of the case I am inclined to agree except that I cannot recognize *C. a. deosai*, unless this name be used for the birds of western Ladak, Kashmir, Baltistan, and Kaghan as a whole, in opposition to *longirostris* of eastern Ladak, Rupshu, and Spiti.

Adult males from Kaghan (N. W. Frontier Province), Darel, Baltistan, Deosai, Burzil Pass, and western Ladak (Dras Valley; Moulbekh; Namika La; Fotu La) agree with each other in long bill, large size, and in having the forehead down to the base of the bill buffy white, the anterior nasal plumes alone being black. Out of twenty, only one (from Lamagoos Pass) has a narrow black frontal band which, though barely interrupted in the middle, is far less developed than in *C. a. elwesi*. In worn (breeding) plumage, the upper parts are rather pale, heavily streaked with dusky on the back, while the hind part of the neck is but slightly tinged with vinaceous buff or pale vinaceous fawn. Specimens in fresh (fall) plumage are exceedingly scarce in collections, the only one I have been able to examine being an adult male obtained by W. L. Abbott on September 23, 1891 in the mountains of central Kashmir in the neighborhood of Srinagar, at an elevation of 11,000 ft. (U. S. National Museum, No. 125528). This bird is even paler vinaceous on the hind neck than the series in breeding plumage, and the back looks almost uniform, the dusky central portion of the feathers being wholly concealed by the broad pale margins. The type of *E. a. deosai* Meinertzhagen,<sup>1</sup> taken on August 24, 1925 on the Deosai Plateau, alt. 13,200 feet, appears to me indistinguishable, the newly grown feathers of the dorsal plumage being neither darker nor browner, as claimed by its describer. From the material examined, I am led to the conclusion that there is but one race in the northwestern Himalayas east to the Fotu La, which is remarkably constant in its characters.

Birds from eastern Ladak, on the other hand, exhibit a good deal of variation in dimensions as well as in length of bill and coloration of forehead. Of three adult males secured by Col. Meinertzhagen on May 9, 1925 at Leh (in flocks, not breeding), one has the forehead buffy white (with only the anterior nasal plumes black) like Kashmir birds; the second has just a narrow black edge; the third has a well-

<sup>1</sup>Bull. Brit. Orn. Cl., 46, p. 84, 1926—Deosai Plateau.

defined black frontal band like *elwesi*. In length of bill, they hold an intermediate position between *elwesi* and the west-Ladak form. Males from the vicinity of Pangong Lake (Tsultak; Lukung; Tankse; Phobrang) are even more variable, those with long bills and white forehead being inseparable from Kashmir birds, while the smaller, short-billed individuals with black frontal band can hardly be told from *elwesi* of Sikkim and southern Tibet. This variation accounts for the creation of two alleged new species, *O. longirostris perissa* Oberholser,<sup>1</sup> based on an adult male (in worn breeding dress) obtained by W. L. Abbott on July 11, 1897 at the Tsokr Chumo Lake, near Debring, Rupshu, and *O. wellsii* Babault,<sup>2</sup> established on an adult male from Serchu, Lahul, taken on July 12, 1914. Whistler<sup>3</sup> has already pointed out that his series from Lahul and the Rhotang Range showed every graduation from a white forehead extending down to the end of the nasal plumes to a black frontal band about 2 mm. wide, and that the variation was purely individual. Moreover, *O. longirostris* was originally described from Kulu, and comparison of the two above mentioned types with Major Hay's original series in the British Museum proved them to be identical. The type of *O. longirostris* and a second male collected by Hay are of the white-fronted, long-billed variety, while a third male from Kulu is a small-billed specimen with distinct black frontal band, differing from *elwesi* merely by slightly larger size.<sup>4</sup> However, certain examples, particularly one from Phobrang in Col. Meinertzhagen's collection, even in dimensions fall well within the measurements of *C. a. elwesi*, as represented by a large series from Sikkim and the Mount Everest region. From the few specimens at hand, it would appear that in fresh fall plumage birds from the Pangong Lake<sup>5</sup> are slightly darker above, with a stronger vinaceous tinge on the hind neck, than those from Deosai and Kashmir, and closely resemble Sikkim birds in similar condition. It thus seems evident that south-eastern Ladak, Rupshu, Kulu, and Lahul are largely inhabited by intergrades between the long-billed, white-fronted form and the smaller, black-fronted *elwesi*, and it is unfortunate that *O. longirostris* was based on a specimen from this "contact zone" (to use Meinertz-

<sup>1</sup>Proc. U. S. Nat. Mus., 24, p. 869, 1902 (type in U. S. National Museum examined).

<sup>2</sup>Mission Babault, Rés. Scient., Ois., p. 203, pl. 4, 1920 (type in Paris Museum examined).

<sup>3</sup>Journ. Bomb. Nat. Hist. Soc., 29, p. 560, 1923.

<sup>4</sup>Whistler (Journ. Bomb. Nat. Hist. Soc., 31, p. 474, 1926) actually refers Hay's specimens to two races, *O. a. longirostris* and *O. a. elwesi*.

<sup>5</sup>No fall specimens are available from either Kulu or Rupshu.

hagen's expression) where pure-blooded individuals are of rather rare occurrence. How far this zone of intergradation extends in the east, cannot at present be determined, owing to lack of material from Garhwal, Kumaon, and Nepal.

Males from Sikkim and the adjoining section of southern Tibet (Telepla, Tingre, Phari), on the other hand, are quite constant in their characters. They are small with short bills, and always show a conspicuous black frontal band, from 2 to 4 mm. wide. In worn plumage, they are strongly tinged with vinaceous (ranging from light vinaceous russet to sorghum brown) on the hind neck and upper mantle, and compared to specimens in corresponding dress from western Ladak and Kashmir, they are much more deeply colored as well as less heavily streaked above. In addition to the series obtained by Wollaston during the Mount Everest Expedition and numerous native Sikkim skins, I have examined two adult males, including the type of *O. elwesi* Blanford,<sup>1</sup> from Kongra Lama Pass (alt. 15,000 feet), Sikkim, collected by H. J. Elwes early in October, 1870. It appears to me extremely doubtful whether *O. nigrifrons* Przewalski, from northeastern Tibet (Kukunor; Nan Shan) and western Kansu, recently revived by Bangs and Peters,<sup>2</sup> is really separable from *C. a. elwesi*. The supposed difference in size does not exist. Males from Sikkim and the Mt. Everest region measure on the wing from 113 to 120; those from northeastern Tibet and Kansu, from 111 to 121 mm. As far as coloration is concerned, *nigrifrons* is very slightly paler above in both fresh and worn plumage. Unfortunately, no adequate series from the range of *elwesi* is available for direct comparison with the twenty-four skins from the Kukunor region kindly lent by Mr. Outram Bangs.

*C. a. longirostris*, under which name I propose to unite the Horned Larks of the western Himalayas from Kaghan east to the Sutlej Valley (or possibly even Kumaon), appears to find the northern limit of its distribution in the Karakoram Range. Five adult males collected on the Sassir La by Col. Meinertzhagen late in July, 1925 are perfectly typical of the west-Ladak form, being long-billed and white-fronted (with only the anterior nasal plumes black), though by slightly smaller size (wing 120 to 125) and paler back they exhibit a certain trend in the direction of the next form.

<sup>1</sup>Journ. Asiat. Soc. Beng., 41, Part 2, p. 62, 1872.

<sup>2</sup>Bull. Mus. Comp. Zool., 68, p. 369, 1928.

**Chionophilos alpestris argaleus** (Oberholser). Sughet Horned Lark.

*Otocoris longirostris argalea* OBERHOLSER, Proc. U. S. Nat. Mus., 24, p. 871, 1902—Sughet Pass, "Kuen Lun Mts." = Sughet Range (type in U. S. National Museum examined).

CHINESE TURKESTAN, HILL YARKAND: Sughet Pass (alt. 16,000 ft.), two ♂♂ ad., one ♀ ad. (breeding), June 26; Sughet Karaul, two ♂♂ ad., June 27, 1925.

The type obtained by W. L. Abbott on the Sughet Pass on July 28, 1893 agrees with our males except in having a slightly narrower black frontal band. In addition, I have examined in the British Museum four adult males and two females collected at Aktagh on the upper Raskam Darya, a little to the south of Sughet Pass, in June, 1874 by J. Biddulph and F. Stoliczka. Four adult males in the Hume Collection, labeled "Yarkand, J. Biddulph", belong likewise here, though they are in somewhat fresher (less worn) plumage. Of course, they did not come from Yarkand City, but were doubtless secured somewhere in Hill Yarkand, either at Sughet or Aktagh.

*C. a. argaleus*, though ignored by all recent authorities, appears to be a good form, somewhat intermediate between *C. a. elwesi*, of southern Tibet, and *C. a. teleschowi* (Przewalski), of the western Kuenlun. On comparing the thirteen males with an equal number of breeding specimens of *elwesi*, those from the Sughet Range are immediately distinguished by their much paler, more sandy upper parts. The hind crown and nape are much lighter and less rufescent, varying from vinaceous fawn to vinaceous buff, this color gradually passing into avellaneous on back and rump, with but a few indistinct dusky streaks on the lower back. In *elwesi* (including *nigrifrons*), the vinaceous color is much deeper, ranging from light russet vinaceous to sorghum brown, and is sharply defined posteriorly; the ground color of the back, while not different in tone, gives a darker impression by reason of the dense, well pronounced dusky streaking of the mantle and rump. In size, small short bill, and distinct black frontal band, the two races are practically identical. Females of *argaleus* are merely separable by their paler, more sand-colored upper parts.

The series of males is remarkably constant except for a certain variation in the extent of the black on the forehead, which is, however, not greater than in the allied *C. a. elwesi*. The black jugular band is separated from the black cheeks by a distinct white gap.

According to our actual knowledge, *C. a. argaleus* is restricted to the Sughet Range (Sughet Karaul, Sughet Pass, Aktagh), though it may be expected to extend into the Raskam Range. Its breeding area certainly does not reach to the main Karakoram, for a series of adult males (from late July) from the Sassir La in Col. Meinertzhagen's collection, as stated under the preceding form, are undoubtedly referable to *C. a. longirostris* ("deosai" type, with entirely white forehead and long bill).

Farther north, on the *northern* slope of the western Kuenlun (Khotan-tagh, Keriya Range, Russian Range), the very distinct *C. a. teleschowi* (Przewalski) is found. This race is very similar to *C. a. argaleus*, but even paler above; besides, it is somewhat smaller, with a larger bill and, furthermore, easily distinguished in the male sex by the complete absence of the white postfrontal band, the whole anterior crown from the base of the bill to the occiput being uniform black, while the female differs by lacking the whitish forehead. I have seen two adult males, taken by M. W. Pewtzow in June, 1890, at Karasai, Russian Range; another male from the same range, secured by Przewalski in May, 1885; and a breeding female (with eggs), collected by Rückbeil in May, 1903, in the Altyn-tagh, south of Lob Nor, all in the Tring Museum. Bianchi<sup>1</sup> records breeding adults and young birds from Tochtachon (alt. 9,000 feet), north of the Raskam Range, and from various places between the Khotan Darya and Cherchen Darya. In the nesting season, this form inhabits the mountain slopes between 6,000 and 10,000 feet, but in winter it repairs to lower altitudes. According to Bianchi,<sup>2</sup> an adult male obtained by F. Stoliczka at Karghalik on Nov. 9, 1873,<sup>3</sup> belongs likewise to *C. a. teleschowi*.<sup>4</sup>

### **Chionophilos alpestris dilutus** (Sharpe). Pamir Horned Lark.

*Otocorys pallida* (not of DWIGHT, April, 1890) SHARPE, Cat. B. Brit. Mus., 13, p. 533, later than May 10, 1890—"Central Asia;" the type examined in the British Museum was collected by J. Biddulph at Kashgar, eastern Turkestan.

*Otocorys diluta* SHARPE, o. c., p. 670, 1890—new name for *O. pallida* SHARPE nec DWIGHT.

CHINESE TURKESTAN: Kisil Bulok, South Musart River (alt. 6,300 ft.), Tian Shan, two ♂♂ ad., one ♀ ad., one juv., Sept. 16, 17, 1925.

<sup>1</sup>Wiss. Res. Reisen Przewalski, 2, Birds, p. 251, 1905.

<sup>2</sup>Bull. Acad. Sci. St. Pétersb., (5), 23, p. 209, 1905.

<sup>3</sup>*O. elwesi* SHARPE (p. 50), No. 940.

<sup>4</sup>The birds, ♀ ad. and juv., from the vicinity of Sanju, recorded by Scully (p. 174) as *O. penicillata*, probably were also *C. a. teleschowi*. Unfortunately, their present location is unknown.

In addition, Field Museum has several winter specimens from Narynsk, Tian Shan, and the U. S. National Museum supplied the type of *O. p. oreodrama* Oberholser<sup>1</sup> from the Tagdumbash Pamir, an adult female from Turugart Pass (12,000 ft.), Tian Shan, and three adults from Bulun-kul, Sarikol, collected by W. L. Abbott. This material has been carefully compared with the series from eastern Turkestan and Gilgit in the British Museum and Tring Collection, but owing to the lack of an adequate number of breeding birds the results are not quite satisfactory.

Specimens from Kisil Bulok, Turugart Pass, Karghalik, and Kashgar, all winter birds taken between September and March, are doubtless identical with the type of *O. diluta*, from Kashgar (December, 1873), although the upper parts are slightly variable in tone. One of our specimens from Kisil Bulok being in juvenile plumage, it may reasonably be assumed that *C. a. dilutus* is the Horned Lark breeding in the Tian Shan along the northern border of the Tarim basin.

Not a single breeding bird from any locality in the central Tian Shan is available for comparison. Among the numerous winter specimens from Narynsk and Issik-kul, there are a good many that cannot be distinguished from the two males from Kisil Bulok in the Roosevelt Collection. If Hartert (Vög. Pal. Fauna, 1, p. 262) is correct in applying to them the name *albigula* Bonaparte, the distinction of *diluta* from that form is perhaps questionable.

The type of *O. p. oreodrama*, an adult male in breeding plumage, was obtained by W. L. Abbott on June 16, 1894 in the Tagdumbash Pamir, at an elevation of 12,000 feet. Aside from being less worn, it is identical with two adult males (taken together with an adult female and three young birds in spotted plumage) from the Shandur Plateau, western Gilgit, in the British Museum. An adult male in fresh fall plumage from the Tagdumbash Pamir (alt. 14,000 ft.), secured on October 29, 1897 and preserved in the same institution, is an exact duplicate, both in size and coloration, of the type of *O. diluta*, while three adults (April) from Bulun-kul, road to Sarikol, in the same general region are decidedly more sandy above than any other specimen of *diluta*. Sixteen birds from Gilgit, collected by Biddulph and Scully between October and March, are grayer, agreeing with the average from Kashgar and the southern Tian Shan. One adult male, Nov. 17, 1879, J. Scully, in the Tring Museum, however, is fully as sand-colored as the Bulun-kul birds.

<sup>1</sup>Proc. U. S. Nat. Mus., 24, p. 876, 1902.

The variation thus seems to be individual rather than racial and, for the present, I do not see my way clear to separate *oreodrama*, of the Pamir and Shandur Plateau, from *C. a. dilutus*.

*C. a. dilutus* is very similar to *C. a. argaleus*, from the Sughet Range, differing only by more heavily streaked back and by having the black of the cheeks confluent with the black jugular band,<sup>1</sup> and evidently replaces it in the mountains along the western border of the Tarim basin, reaching south into extreme northwestern India (Chitral-Gilgit frontier). In winter it is common in the plains of Kashgaria.

## MEASUREMENTS OF ADULT MALES

<i>C. a. dilutus</i>	WING	BILL
Two from Tagdumbash Pamir <sup>2</sup>	118,119	11½,12
One from Bulun-kul, road to Sarikol	118	12
Two from Kisil Bulok, S. Musart River	114,115	11,11
Twelve from Kashgar <sup>3</sup>	112,113,114,115,116,117, 118,120,120,121,123,123	10½-12
Three from Karghalik	116,117,122	12
One from Karakol, Tian Shan	120	13
Three from Narynsk, Tian Shan	114,114,116	11,12,12
<i>C. a. longirostris</i>		
Two from Kaghan, N. W. Frontier Province	121,125	16,16
One from central Kashmir (above Srinagar)	132	15
One from Baltistan	128	15
Two from Darel, Gilgit	122,124	14½,15
Five from Burzil Pass, Gilgit	126,126,127,128,129	15,16,16,16,16
Three from Deosai Plateau <sup>4</sup>	125,130,130	15½,16,16
Two from Dras, W. Ladak	125,128	15½,17
One from Lahor (east of Dras), W. Ladak	127	16
Two from Moulbekh, Ladak	122,125	15,16
One from Namika La, Ladak	128	17
One from Fotu La, Ladak	124	15
Five from Sassir La, Karakoram, N. Ladak	120,123,123,125,125	15,15,15½,15½, 16
Three from Leh, Ladak	122,124,125	13,14,14½
One from Tankse, E. Ladak	118	12
Two from Tsultak, E. Ladak	122,125	13,13½
One from Lukung, E. Ladak	128	14
Two from Phobrang, E. Ladak	117,120	11½,12

<sup>1</sup>Hartert's diagnosis (in Vög. Pal. Fauna, 1, p. 259) of *O. a. diluta* is altogether misleading, and the distribution refers but partly to that form. Later (o. c., 3, p. 2092, 1921) he correctly states that the black of the sides of the head and that of the jugular band are united in *O. a. diluta*. The specimens labeled "Yarkand. J. Biddulph" in the British Museum are not *elwesi*, but *argaleus*, as we have shown under the preceding heading.

<sup>2</sup>Including type of *O. p. oreodrama*.

<sup>3</sup>Including type of *O. diluta*.

<sup>4</sup>Including type of *E. a. deosai*.

Three, from Pangong Lake, E.		
Ladak	—,120,129	12,12½,15
One from Tsokr Chumo Lake,		
Rupshu <sup>1</sup>	125	13
One from Debring, Rupshu	120	[13]
One from Serchu, Lahul <sup>2</sup>	125	14½
Three from Kulu <sup>3</sup>	122,125(type),128	12,16(type),16
<i>C. a. elwesi</i>		
Eighteen from Sikkim <sup>4</sup>	116-118,119(once), 120(three)	11-12
One from Gyantse, Tibet	115	12
One from Phari, Tibet	119	12
Six from Tingre, Tibet	113,114,114,115,117,120	11,12,12,12,12,12½
<i>C. a. argaleus</i>		
Three from Sughet Pass <sup>5</sup>	118,120,122	12,12,12
Two from Sughet Karaul	119,120	12,12
Four from Aktagh	114,115,116,119	12,12,12,13
Four from "Yarkand"	117,120,121,122	12,12,12,13
<i>C. a. teleschowi</i>		
Three from Russian Range (Karasai)	106,109,113	13,13½,14

**Anthus roseatus** Blyth. Hodgson's Pipit.

*Anthus roseatus* (Hodgson MS.) BLYTH, Journ. Asiat. Soc. Beng., 16, (1), p. 437, 1847—Nepal.

KASHMIR: Baltal (alt. 9,600 ft.), ♂ ad., May 23, 1925.

The late date seems to indicate that this bird, which is in perfect nuptial plumage, was breeding. The conclusion that the species does breed in Kashmir also results from Abbott's taking of specimens late in July in the mountains near Srinagar at altitudes of 11,000 and 12,000 feet, as recorded by Richmond (p. 470). Besides, Bates (Journ. Bomb. Nat. Hist. Soc., 29, p. 800, 1923) states that he found these pipits nesting in large numbers between the Sind and Liddar valleys, from 11,000 ft. up to the snow-level.

*A. roseatus* visits Ladak and Gilgit only on migration, though Biddulph (Ibis, 1882, p. 280) received specimens shot in July from Darel, and Whitehead (Ibis, 1909, p. 244) found it breeding on the Safed Koh. It is much more plentiful in the eastern Himalayas, in Rupshu (Babault, p. 201), Lahul (Whistler, Ibis, 1925, p. 190), Garhwal, Nepal, and thence ranges through southern Tibet to Kansu and Kukurun. Przewalski found it in the Russian Range and Keriya Range, along the southern border of the Tarim basin.

<sup>1</sup>Type of *O. l. perissa*.

<sup>2</sup>Type of *O. wellsi*.

<sup>3</sup>Including type of *O. longirostris*.

<sup>4</sup>Including type of *O. elwesi*.

<sup>5</sup>Including the type.



**Budytes citreolus calcaratus** (Hodgson).<sup>1</sup> Hodgson's Yellow-headed Wagtail.

*Motacilla calcarata* HODGSON, *Asiat. Resear.*, 19, p. 190, 1836—Nepal.

LADAK: Lotsun, Wakka-Chu River, near Bod Kharbu (alt. 9,500 ft.), ♂ ad., May 28; Panamik, Nubra, ♂ ad., ♀ ad., June 13, 14, 1925.

Ladak birds agree with others from Nepal in the British Museum. This form of the Yellow-headed Wagtail breeds throughout the Himalayas from the Afghan border east to southern Tibet. The northern limit of its breeding range is not easy to determine. According to Sushkin,<sup>2</sup> it extends as far north as Narynsk (western Tian Shan), Guchen (north foot of the eastern Tian Shan), Mongolia, and Ordos. From the information at hand, it is doubtless the black-backed form that breeds in the Tian Shan, where specimens were taken during the nesting season by Severtzow (1875, p. 175), Akulin (Gyldenstolpe, p. 12), and Merzbacher (Laubmann, p. 70). The first-named author<sup>3</sup> lists it also as being abundant near the sources of the Kashgar Darya.

A series from the plains of Kashgaria (Mesha Yakshamba Mazar, July 17; Maralbashi, Kashgar River, July 28, 29) and the southern foothills of the Tian Shan (Conishar, six miles northeast of Aksu, Aug. 7, 8, 1925) in the present collection I am, however, unable to allocate satisfactorily. Aside from two birds in juvenile plumage, they are all either excessively worn breeding females or in the process of molting into the winter dress. None has any black on the back, and their tarsi are decidedly shorter than in *B. c. calcaratus*. This leads me to the conclusion that they must be referable to one of the gray-backed races,<sup>4</sup> although the unsatisfactory condition of the material does not permit a decision as to whether they are *B. c. citreolus* or *B. c. werae* Buturlin.<sup>5</sup> The nearest breeding colony of a gray-backed form seems to exist near Jarkent, on the upper Ili, Turkestan, which Sushkin (o. c., p. 38) associates with *B. c. citreolus*, while Ticehurst<sup>6</sup> refers birds from that locality to *B. c. werae*. The only measurable male has a wing of 83 mm., and the flanks are barely tinged with grayish, both features speaking for *werae* rather than *citreolus*.

<sup>1</sup>About the substitution of the subspecific name *calcaratus* for *citreoloides*, see Ticehurst, *Bull. Brit. Orn. Cl.*, 41, p. 81, 1921, and *Journ. Bomb. Nat. Hist. Soc.*, 28, p. 1085, 1922.

<sup>2</sup>*Proc. Boston Soc. N. H.*, 38, p. 40, 1925.

<sup>3</sup>Ibis, 1883, p. 63.

<sup>4</sup>Scully (p. 151) actually identified the Yellow-headed Wagtail breeding in the Tarim basin as *B. citreola*.

<sup>5</sup>*Ornith. Monatsber.*, 15, p. 197, 1907.

<sup>6</sup>*Bull. Brit. Orn. Cl.*, 46, p. 114, 1926.

**Motacilla cinerea caspica** (S. G. Gmelin).<sup>1</sup> Eastern Gray Wagtail.

*Parus caspicus* S. G. GMELIN, Reise Russl., 3, p. 104, pl. 20, fig. 2, 1774—  
Enseli, Ghilan, northern Persia.

KASHMIR: Gund (alt. 7,000 ft.), ♀ ad., May 21; Baltal (alt. 9,500 ft.),  
♂ ad., May 23, 1925.

LADAK: Leh, ♂ ad., June 3, 1925.

CHINESE TURKESTAN: Shatta, Tekes Valley, Tian Shan, two ♂♂ ad., one  
♀ ad. (winter plumage), Aug. 23, 24, 1925.

The Eastern Gray Wagtail appears to breed locally in the Himalayas. Whitehead (Ibis, 1909, p. 240) records it as "nesting freely along the streams of the Safed Koh, from 6,000 to 8,000 feet." Whistler (Ibis, 1925, p. 187) found it "common in summer along the banks of the Chandra and Bhaga rivers from Chaturu to Darcha," in Lahul, and Babault (p. 198) also lists a female taken late in June at Sisa, Lahul. In Ladak, while not rare on migration, it seems to be rather uncommon in the breeding season. Wathen (p. 701) mentions having found a nest near Leh (about 11,500 ft.); Meinertzhagen (Ibis, 1927, p. 405) met with the species at Gya (about 12,000 ft.) in early July; and Osmaston (Ibis, 1925, p. 700) says that it is generally distributed in Ladak up to 13,000 feet, but nowhere common. Abbott, as reported by Richmond (p. 468), obtained specimens in late July and August in the Pir Panjal Range and other parts of Kashmir, and Bates (Journ. Bomb. Nat. Hist. Soc., 29, p. 800, 1923) encountered it on the Madmatti, from Sonerwain onwards, at the end of May.

**Motacilla alba alboides** Hodgson.<sup>2</sup> Hodgson's Wagtail.

*Motacilla alboides* HODGSON, Asiat. Resear., 19, p. 191, 1836—Nepal.

LADAK: Shimsa Kharbu, Dras River, ♂ ad., May 26, 1925.

Identical with other males in nuptial plumage from the Himalayas in the British Museum.

The nesting area of Hodgson's Wagtail comprises a large section of the Himalayas. In Kashmir and Ladak<sup>3</sup> as well as in Baltistan it is the only breeding form of this group, being generally distributed

<sup>1</sup>This is an earlier name for *Motacilla cinerea melanope* PALLAS, 1776. See Laubmann, Ornith. Monatsber., 30, p. 89, 1922.

<sup>2</sup>As pointed out by Oberholser (p. 222), this name has priority over *M. hodgsoni* BLYTH, 1865. See also the remarks by Brooks (Stray Feathers, 2, pp. 139-140, 1878) and Hume (op. cit., pp. 519-520, 1879).

<sup>3</sup>Osmaston (Ibis, 1925, p. 700; Journ. Bomb. Nat. Hist. Soc., 32, p. 131, 1927) records *M. alba personata* from Shushal on the Indus, describing the nest and eggs; but the female (shot off the nest) was found by Meinertzhagen (Ibis, 1927, p. 406) to be *M. a. alboides*. Hartert (Vög. Pal. Fauna, 1, p. 307), by mistake, excludes Kashmir from the range of *M. a. hodgsoni*.

throughout the valleys and along the water courses up to nearly 15,000 feet. Eastward it extends through Rupshu, Lahul, Kulu, Spiti, Garhwal, and Kumaon to Nepal, Sikkim, southern Tibet, and western China,<sup>1</sup> and northward to the Kuenlun, where Henderson secured "specimens in nearly full breeding plumage" on the Chuchu Pass, recorded by Hume (p. 223) as "*M. luzoniensis*." I was at first inclined to question the correctness of this identification; but Mr. Kinnear (in litt.) tells me that the example in the British Museum is an undoubted *alboides*. In Gilgit, both gray-backed and black-backed males are stated by Scully (Ibis, 1881, p. 451) to occur during the nesting season, and it is quite possible that *M. a. personata* and *M. a. alboides* intergrade in that section. However, Mr. Kinnear (in litt.) writes that a male, obtained by J. Biddulph in Gilgit, alt. 8,000 ft., on June 28, is typical *alboides*.

### *Motacilla alba personata* Gould. Masked Wagtail.

*Motacilla personata* GOULD, Birds of Asia, 4, pl. 63, 1861—"native country believed to be Bengal and the central and northern parts of Hindustan."

CHINESE TURKESTAN: Sanju Bazar, Sanju River, (alt. 6,600 ft.), Hill Yarkand, ♂ (juvenile plumage), July 5; Maralbashi, ♂ (juv. plumage), July 25; Shamal, near Maralbashi, ♀ juv., July 22; Conishar, six miles northeast of Aksu, ♀ ad. (winter), Aug. 8; Shatta, Tekes Valley, Tian Shan, ♂ ad. (winter), ♂ (juv. plumage), Aug. 24, 1925.

The juvenile plumage, in disagreement with Hartert's<sup>2</sup> description, does not differ in coloration of under parts from that of *M. a. alba*, chin and throat being whitish, separated from the white of the abdomen by a grayish brown jugular band, tinged with buff; it has, however, much more white on the wing than the European form.

*M. a. personata* is the breeding form of the Tarim basin where, according to Scully (p. 150), it occurs in great numbers throughout the plains. Both Henderson (p. 224) and Scully found it at Oi Tograk; the Second Yarkand Mission (Sharpe, p. 56) at Yarkand and Karghalik; Abbott, as recorded by Richmond (p. 580), at Kilian (August 9, 1893). In the south, it ascends the foot hills of the Kuenlun to certain altitudes, as is shown by the young bird from Sanju Bazar (6,600 ft.) in the present collection. Henderson had already taken adults and nestlings in practically the same region along the Arpalak River, and Parrot (p. 257) lists an adult male from Khotan (May 22) in his report on Zugmayer's collection. Besides,

<sup>1</sup>According to Riley (Proc. U. S. Nat. Mus., 70, art. 5, p. 53, 1926), birds from Szechwan and Yunnan have less white on the wing than those from Kashmir.

<sup>2</sup>Vög. Pal. Fauna, 1, p. 307.

*M. a. personata* was found by Przewalski<sup>1</sup> on the north slope of the Khotan-tagh, Keriya Range, and Russian Range, probably at low elevations; for we have seen, as stated under the preceding heading, that higher up, near the sources of the Arpalak River, at Chuchu Pass, the black-backed *M. a. alboides* takes its place.

*M. a. personata* also breeds in the Tian Shan and Russian Turkestan, ranging west through Transcaspia into Persia, north to the Altai and Lake Baikal, south through the Pamir to northern Baluchistan and the Kurram Valley, N. W. Frontier Province.<sup>2</sup>

I agree with Ticehurst<sup>3</sup> that no subdivision of this form is practicable.

***Certhia himalayana limes* Meinertzhagen. Intermediate Tree Creeper.**

*Certhia himalayana limes* MEINERTZHAGEN, Bull. Brit. Orn. Cl., 42, p. 141, 1922—Gilgit.

KASHMIR: Baltal (alt. 9,500 ft.), May 25, 1925.

Agreeing with the type and other specimens from the N. W. Himalayas in the British Museum. After going over the entire series in that collection, I cannot but recognize *C. h. limes*, as defined by Meinertzhagen. Though not very strongly marked and exactly intermediate between *C. h. himalayana* and *C. h. taeniura*, the series from N. W. India cannot well be united to either of the two. Its range appears to comprise Kashmir, Dardistan, Gilgit, Rawalpindi (south to the Salt Range), N. W. Frontier Province, northern Baluchistan, and probably the adjacent section of Afghanistan.

***Certhia familiaris tianschanica* Hartert. Tian Shan Tree Creeper.**

*Certhia familiaris tianschanica* HARTERT, Vög. Pal. Fauna, 1, p. 321, 1905—Aksu, southern Tian Shan.

CHINESE TURKESTAN: Agijas, Tekes basin, Tian Shan, ♀ (juv. plumage), Sept. 5, 1925.

This Tree Creeper is peculiar to the Tian Shan where it is confined to the coniferous mountain forests.

<sup>1</sup>See Pleske, Wiss. Res. Reisen Przewalski, 2, Birds, Part 3, p. 183, 1894.

<sup>2</sup>Whitehead, Ibis, 1909, p. 240.

<sup>3</sup>Bull. Brit. Orn. Cl., 48, p. 118, 1928.

**Sitta europaea cashmirensis** Brooks. Brooks's Nuthatch.

*Sitta cashmirensis* BROOKS, Proc. Asiat. Soc. Beng., 1871, p. 209—Kashmir.  
KASHMIR: Baltal (alt. 9,500-9,700 ft.), ♂ ad., ♀ ad., May 23, 1925.

Agreeing with specimens in the British Museum from Sonamarg, Gulmarg, and the Safed Koh Range. The male differs from the buff-bellied forms (*pinetorum*, *persica*, *rubiginosa*) of the Palaearctic Nuthatch by slenderer bill, much deeper, chestnut-rufous abdomen and crissum, and by lacking the prominent white markings on the under tail coverts, which are barely suggested by dark gray basal spots. Underneath, the female is quite as pale as that of *S. a. pinetorum* (*caesia* auct.),<sup>1</sup> from which it can only be distinguished by the almost uniform buffy under tail coverts, in addition to its decidedly weaker bill. There is no doubt in my mind that *cashmirensis* is conspecific with *europaea*, as has been intimated by Meinertzhagen and Kleinschmidt.

The range of *S. e. cashmirensis* is evidently restricted to the extreme northwestern section of British India. It appears to be fairly common in Kashmir. Sharpe (p. 64) records it from Sonamarg and Baltal; Richmond (p. 471) from the Vale of Kashmir, the Pir Panjal Range, and the Kij Nag Mountains; Meinertzhagen (*Ibis*, 1927, p. 410) from Gund, Gulmarg, and the Wular Lake. Westwards it extends to the Murree Galis, Chitral, and the Afghan Frontier (Safed Koh<sup>2</sup> and Hariab District),<sup>3</sup> but in the east it does not even cross the Great Himalayan Range into Ladak.<sup>4</sup>

**Parus major caschmirensis** Hartert. Kashmir Gray Tit.

*Parus major caschmirensis* HARTERT, Vög. Pal. Fauna, 1, p. 345, 1905—Gilgit.

LADAK: Leh, three ♂♂ ad., one ♀ ad., (nesting) June 4, 5, 1925.—Wing of males 73, 75, 77, of female 69 mm.

These specimens agree with a topotypical series from Gilgit in the British Museum. Birds from Baltistan and Kashmir appear to be similar, while those from Chitral and N. W. Frontier Province (Kurram; Safed Koh) are paler and seemingly inseparable from *P. m. intermedius* Sarudny.

<sup>1</sup>For change of name, see Kleinschmidt, *Berajah*, *Sitta* Auto-Sitta, p. 11, 1928.

<sup>2</sup>Whitehead, *Ibis*, 1909, p. 115.

<sup>3</sup>Wardlaw-Ramsay, *Ibis*, 1880, p. 51.

<sup>4</sup>I do not know on what authority Baker (*Fauna Brit. India*, 2nd ed., *Birds*, 1, p. 128, 1922) gives its range as extending from "Afghanistan to Garhwal." There is certainly no reliable record for its occurrence anywhere east of Kashmir proper.

The range of *P. m. caschmirensis* stretches from Gilgit and Kashmir through Ladak to Kangra and even to Lahul, where Whistler (Ibis, 1925, p. 165) found a single pair breeding at Kyelang (10,500 ft.) on June 9, 1921.

Farther east, in the Simla Hills, Garhwal, and Nepal, it is replaced by *P. m. cinereus* Vieillot. It is doubtless by mistake that Baker<sup>1</sup> includes the two first named localities in the range of *caschmirensis*.

**Parus cyanus tianschanicus** (Menzbier). Tian Shan Blue Tit.

*Cyanistes cyanus* var. *tian-schanicus* MENZBIER, Bull. Soc. Zool. France, 9, p. 276, 1884—"dans les montagnes qui bordent les déserts de l'Asie centrale au nord-ouest et à l'ouest."

CHINESE TURKESTAN, TIAN SHAN: Autain Bulok, ♂ ad. (very worn), Aug. 15; Shatta, Tekes Valley, two ♂♂ juv. (molting), Aug. 25; Ox-su, Tekes Valley, ♂ juv., ♀ juv., Aug. 30; Simtash, Tekes Valley, ♂ ad., ♀ ad., two ♂♂ juv., Sept. 1, 1925.

The birds from the Tekes Valley which, as may be seen from the dates of capture, were taken immediately after the breeding season are unquestionably referable to *P. c. tianschanicus*, although two or three immature ones, by the slight suggestion of a pale yellowish prepectoral band, manifest their close relationship to *P. c. flavipectus*. Two similar examples obtained by Sarudny, on June 5, 1899, at Jarkent, on the southern base of the Boro-khoro Range, northern Tian Shan, I have seen in the collection of the Tring Museum.

The breeding area of *P. c. tianschanicus* appears to be restricted to the central and eastern Tian Shan, and the northern slope of the Kuenlun.<sup>2</sup> Severtzow (1875, p. 172) lists it as a resident for the Issik-kul, upper Naryn, Ak-sai Plateau, and Semiryechensk (Vyernyi; Kopal); Przewalski, as recorded by Pleske,<sup>3</sup> found it in summer abundant in the valleys of the Kunges, Zanma [=Tsang-ma], and Chaidyk-gol; the brothers Grum-Grzmailo<sup>4</sup> in the districts of Turfan and Hami; and Almásy (Journ. Orn., 54, p. 415, 1906) states that it breeds in large numbers in the Tekes Valley, and sparingly on the lower Ili. South of the Tarim basin, along the northern slopes of the Kuenlun, the Blue-Tit was met with in August by Henderson (p. 232) and Scully (p. 154) in the tamarisk jungles of the Arpalak

<sup>1</sup>Fauna Brit. India, 2nd ed., Birds, 1, p. 76, 1922.

<sup>2</sup>Birds from the lowlands of Siberia, at one time referred to it, are now admitted to constitute a separable form (*P. c. yenissensis* BUTURLIN and TUGARINOW).

<sup>3</sup>Wiss. Res. Reisen Przewalski, 2, Birds, Part 3, p. 162, 1894.

<sup>4</sup>Pleske, Bull. Acad. Sci. St. Pétersb., nouv. sér., 3, p. 126, 1892.

and Sanju rivers, while Stoliczka, according to Sharpe (p. 65), found it breeding in May and June at Pasrobat and in the Duba Valley. For the sake of completeness, it may be added that another breeding place was discovered by Fulton (Journ. Bomb. Nat. Hist. Soc., 16, p. 47, 1904) in the river bed at Shost, alt. 10,000 feet, in Chitral, where five specimens (out of large numbers) were taken in July. During the cold season, the Tian Shan Blue-Tit, like other members of the family, wanders a good deal, and may be seen throughout the winter in suitable places everywhere all over the plains of Turkestan.

*P. c. flavipectus* evidently is a western representative of the Tian Shan Blue-Tit. It is known to breed in the mountains bordering the Ferghana Valley, viz. Ala-tau, Chatkal-tau,<sup>1</sup> Ferghana Range,<sup>2</sup> and Alai-tagh,<sup>3</sup> and in the Alexander Range.<sup>4</sup> In winter it invades the breeding territory of *P. c. tianschanicus*,<sup>5</sup> but so far as I can see, the two races have not yet been found together any place in the nesting season. Hartert,<sup>6</sup> without stating his authority, claims that *P. c. flavipectus* also breeds at "Kapak in the Tian Shan." If this rather obscure locality refers to Kapkak, near the sources of the Tekes—in the heart of the breeding range of *P. c. tianschanicus*—I am rather inclined to the belief that specimens with yellow-tinged chest, such as we have seen from Jarkent and Shatta, have been mistaken for *P. c. flavipectus*.

### **Parus ater rufipectus** Severtzow. Tian Shan Coal Tit.

"*Parus ater* var. *rufipectus* (*asiatica*, Catal.)" SEVERTZOW, *Izv. Obshch. Moskov.*, 8, No. 2, p. 134, 1873—Tian Shan, Turkestan.

CHINESE TURKESTAN, TIAN SHAN: Han Aulik, ♂ ad., Aug. 18; Eidinka, North Musart River, one unsexed (in juvenile molt), Aug. 21; Agijas, Tekes Valley, three ♂♂ ad., one ♂ (in juvenile molt), one ♀ ad., one ♀ (in juvenile molt), Sept. 3, 4, 5; Mointa, Tekes Valley, ♂ ad., Sept. 7, 1925.

This well-characterized race is peculiar to the Tian Shan. Its breeding area, which is chiefly confined to the coniferous forests

<sup>1</sup>Pleske, *Mém. Acad. Sci. St. Pétersb.*, (7th ser.), 36, No. 3, p. 13, 1888.

<sup>2</sup>Stolzmann, *Bull. Soc. Natur. Moscou, nouv. sér.*, 11, p. 69, 1897.

<sup>3</sup>Kollibay, *Journ. Orn.*, 64, p. 603, 1916.

<sup>4</sup>A nearly allied, likewise yellow-chested form, *P. c. carruthersi* HARTERT, breeds in the mountain ranges bordering the Zerafshan Valley, Samarkand. Judging from the original series in the British Museum, it is a fairly well-marked race.

<sup>5</sup>For instance, the Munich Museum has numerous specimens taken between October and March at Narynsk, Tian Shan.

<sup>6</sup>Vög. Pal. Fauna, 3, p. 2113, 1921.

above 8,000 feet, extends from the Ferghana Range where, according to Stolzmann (1897, p. 69), Barey found it at Tarte-kul throughout the western and central chains to the vicinity of Barkul and Hami on the eastern spurs of the Tian Shan system.<sup>1</sup>

**Parus melanolophus** Vigors. Crested Black Tit.

*Parus melanolophus* VIGORS, Proc. Comm. Sci. Corresp. Zool. Soc. Lond., 1, p. 23, Feb., 1831—Himalayas; = Simla-Almora district (see Ticehurst and Whistler, Ibis, 1924, p. 471).

KASHMIR: Baltal (alt. 9,500 ft.), ♂ ad., ♀ ad., May 23, 24, 1925.

This Titmouse is widely diffused throughout the western Himalayas from the Afghan frontier east to Kumaon, being a resident in the pine forests from 5,000 feet upward. While common in Gilgit, Kashmir and Baltistan, whence Richmond (p. 472) recorded it from Rondu and Haramosh, it is absent from Ladak. I expect it will ultimately turn out to be a geographic race of the Coal Tit (*Parus ater*), although it differs strikingly from the members of this group by the cinnamon-rufous sides of the breast and deep gray belly. It is no doubt quite distinct specifically from *P. r. rufonuchalis* Blyth, likewise found in the western Himalayas.

**Parus atricapillus songarus** Severtzow. Turkestan Willow Tit.

*Parus songarus* SEVERTZOW, Izv. Obsheh. Moskov., 8, No. 2, p. 134, 1873—Tian Shan.

CHINESE TURKESTAN, TIAN SHAN: Agijas, ♂ ad., ♀ ad., Sept. 3, 4; Mointa, ♂ ad., Sept. 7; Shatta, Tekes Valley, ♂ ad., juv. (unsexed), Aug. 25, 27, 1925.

This large, richly colored representative of the Willow Tit is likewise peculiar to the Tian Shan,<sup>2</sup> but appears to be less widely distributed than *P. ater rufipectus*, being chiefly restricted to the central section of that mountain system. It is reported as common in the ranges surrounding the Issik-kul, in the upper Naryn Valley, the Kara-tau, the Sary-jass, and has also been met with in the Tekes Valley and its tributaries. Additional to the records enumerated by Laubmann (p. 76), it should be noted that Oustalet (1893, p. 210) lists it from the Tsamgu Valley, south of Masar Pass. In the north, its range extends to the Boro-khoro Range, where specimens were obtained by Przewalski<sup>3</sup> in the vicinity of Sairam Lake, and to

<sup>1</sup>See Pleske, Wiss. Res. Reisen Przewalski, 2, Birds, Part 3, p. 155, 1894.

<sup>2</sup>Hartert (Vög. Pal. Fauna, 1, p. 367, 1905) erroneously included "Lob Nor" (low desert country) in the range of this strictly mountainous species.

<sup>3</sup>See Pleske, Wiss. Res. Reisen Przewalski, 2, Birds, Part 3, p. 157, 1894.



Jarkent, whence Sarudny procured a series of winter birds. No authority appears to exist for its occurrence in the eastern section of the Tian Shan, although a number of nearly related forms are known to inhabit Kukunor, Kansu, and Szechwan.

**Cephalopyrus flammiceps flammiceps** (Burton). Fire-capped Tit-Warbler.

*Aegithalus flammiceps* BURTON, P. Z. S. Lond., 3, "1835," p. 153, 1836—"apud montes Himalayenses."<sup>1</sup>

KASHMIR: Baltal (alt. 9,500 ft.), two ♂♂ ad., May 24, 1925.

Agreeing with specimens from Gilgit and the Simla Hills. Whistler (Journ. Bomb. Nat. Hist. Soc., 28, p. 992, Dec., 1922) found this species not infrequent, in April and May, in the vicinity of Srinagar. The birds were seen in flocks, feeding in willow trees, and evidently had not yet started to breed.

*C. f. flammiceps* ranges from Gilgit<sup>2</sup> and the Murree Galis east to the Simla Hills and Mussorie, nesting in the mountains between 5,000 and 10,000 feet, and descending to the northern plains in winter. It is, however, absent from Ladak. In Sikkim and Bhutan, it is replaced by *C. f. saturatus* Whistler,<sup>3</sup> distinguishable by darker green upper parts and lesser amount of orange-red on forecrown and under parts.

**Panurus biarmicus russicus** (Brehm). Eastern Bearded Tit.

*Mystacinus russicus* BREHM, Handb. Naturg. Deutschl., p. 472, 1831—"lebt in Russland, kommt im Herbst and Winter nach Ungarn und in die Nähe von Wien."

CHINESE TURKESTAN: Oku Mazar (between Tumshok and Maralbashi), ♂ ad., Sept. 25; Maralbashi, two ♂♂ ad., two ♀♀ (juvenile plumage), Sept. 27, July 27, 1925.

Topotypical material is not available, but a series from Hungary agrees with the Turkestan birds in paleness of upper parts,<sup>4</sup> as opposed to the deeply colored *P. b. biarmicus*, of which Field Museum has specimens from England and the Rhone delta (Camargue).

Two birds taken at Maralbashi on July 27 wear the well known juvenile plumage, with the large first primary, extensively black lateral rectrices, black middle back, etc.

<sup>1</sup>Mussorie suggested as type locality by Whistler (Bull. Brit. Orn. Cl., 45, p. 15, 1924.)

<sup>2</sup>Its regular occurrence in Afghanistan is open to doubt.

<sup>3</sup>Bull. Brit. Orn. Cl., 45, p. 15, 1924.

<sup>4</sup>See also Hartert, Vög. Pal. Fauna, 3, pp. 2128-29, 1921.

The eastern race of the Bearded Tit is widely distributed in Palaearctic Asia, and stretches westward into Poland and Hungary. In the Tarim basin it is reported to be exceedingly common among the reeds and rushes, growing in marshy ground and along the borders of lakes. It appears to be a permanent resident there, Abbott (see Richmond, p. 581) having procured a series near Maralbashi around Christmas time. The Second Yarkand Mission, as reported by Sharpe (p. 68), also met with it at various localities in the Yarkand plains in the months of November and January, while Oustalet (1893, p. 214) lists a couple of adults obtained by Prince Orléans's party at Aktarma, lower Tarim, on October 16, 1889.

**Lanius cristatus isabellinus** Hemprich and Ehrenberg. Pale Brown Shrike.

*Lanius isabellinus* HEMPRICH and EHRENBURG, Symb. Phys., Aves, 1, fol. E, footnote, 1839—Gumfuda, Arabia.

CHINESE TURKESTAN: Yakshamba Mazar, ♀ ad., July 17; Lailik-ötang, Yarkand River, ♂ imm., July 18; Aka-dong, Yarkand River, ♂ imm., July 19; Alager, Yarkand River, ♂ juv. (pullus), July 21; Aksak-märal, ♀ ad., ♀ (in juvenile molt), July 22; Shamal, Yarkand River, three ♀ ♀ juv., July 22, 23; Maralbashi, ♂ imm., one (unsexed) juv., July 27; Yaka-kuduk (near Maralbashi), ♀ ad., Sept. 23; Conishar (six miles northeast of Aksu), two ♀ ♀ ad., three ♀ ♀ imm., Aug. 7, 9, 1925.

On careful comparison with the large series of shrikes in the Tring Museum, all of these specimens were found to belong to *L. c. isabellinus*, as understood by Hartert (Vög. Pal. Fauna, 1, p. 444). The coloration of the upper parts is somewhat variable, and occasionally shows a decided rufescent tone. Even these aberrant examples, however, have the pileum much less rufous than *L. c. phoenicuroides*, as represented by a good series from Russian Turkestan and Persia.

*L. c. isabellinus* is the only shrike of this group breeding in Chinese Turkestan. It is a common species in the Tarim basin and in the hills of Yarkand. According to Scully (p. 137, *L. arenarius*), who gives a full account of its nesting habits in Yarkand, it ascends to high elevation in the Kuenlun, specimens having been observed by him north of Chuchu Pass at an altitude of about 10,000 feet. There can be little doubt that Henderson and Hume (p. 182), in spite of the latter's emphatic protest,<sup>1</sup> were mistaken in referring the Yarkand shrikes to *L. cristatus*. The Second Yarkand Mission, as

<sup>1</sup>Stray Feathers, 4, p. 139, note.

recorded by Sharpe (p. 70), and Dr. W. L. Abbott (see Richmond, p. 581) also met with *L. c. isabellinus* at various localities in Yarkand and Kashgaria. The exact limits of its breeding area are, however, still imperfectly known. In the western spurs of the Tian Shan, on the Chir-chik River at Pskem, one meets already with *L. c. phoenicuroides*, as we are told by Kollibay (1917, p. 444).

### *Phylloscopus tristis sindianus* Brooks. Sind Warbler.

*Phylloscopus sindianus* BROOKS, Stray Feathers, 8, p. 476, March, 1880—Sukkur, northern Sind (type in British Museum examined).

LADAK: Shimsa Kharbu, Dras Valley (alt. 9,800 ft.), ♂ ad., May 26; Lamayuru (alt. 11,500 ft.), ♂ ad., May 30; Panamik, Nubra, three ♂♂ ad., June 11, 1925.

Additional specimens.—British Museum: Sukkur, Sind, ♀ ad. (type), ♂ ad., January 24, 1880. W. E. Brooks; Lamayuru, Ladak, ♀ ad., July 31, 1923. B. B. Osmaston; Leh, two ♂♂ ad., June 30, Sept. 7, 1873. J. Biddulph; Leh, adult (unsexed), Aug. 28, 1875. F. Stoliczka, No. 569.—Ú. S. National Museum: Zogi-bul Pass (alt. 11,000 ft.), Kashmir, ♂ ad., ♀ ad., June 20, 1893; Pashgam (alt. 9,000 ft.), Dras Valley, ♂ ad., June 25, 1893; Shergol (alt. 10,000 ft.), Ladak, ♂ ad., June 23, 1893; Indus Valley, Ladak (alt. 11,000 ft.), ♀ ad., June 30, 1893; Nimu (alt. 10,000 ft.), Indus Valley, Ladak, ♂ ad., 1897. All collected by W. L. Abbott.

Until recently, information about the distribution of this Warbler was very scanty, the Russian (Keriya) Range on the southern border of the Tarim basin, as recorded by Pleske,<sup>1</sup> being the only locality where it had been found during the breeding season. Although a species of *Phylloscopus* has long been known to breed in the high mountains of Ladak and in the Karakoram, it had generally been referred to *Ph. tristis*,<sup>2</sup> until Baker<sup>3</sup> recognized it as belonging to *P. t. sindianus*, an identification later corroborated by Meinertzhagen (Ibis, 1927, p. 418) and Ticehurst (Journ. Bomb. Nat. Hist. Soc., 32, p. 356, 1927). My own studies having led to the same conclusion, it may be considered as established that the Sind Warbler is a widely diffused breeding species throughout the western Himalayas and in the adjacent section of Chinese Turkestan.

<sup>1</sup>Ornith. Ross., 2, Part 2, p. 284, 1889.

<sup>2</sup>Henderson and Hume, p. 219—Ladak and Karakash Valley; Scully, p. 148—Karakash and Sanju valleys; Sharpe, p. 77—Sonamarg, Baltal, and various Ladak localities; Richmond, p. 475—Zogi-bul Pass and Pashgam; Oberholser, p. 223—Shergol and Nimu, Indus Valley; Ludlow, Journ. Bomb. Nat. Hist. Soc., 27, p. 142, 1920—Leh; Wathen, o. c., 29, p. 698, 1923—from below Matayan to Leh; Osmaston, Ibis, 1925, p. 678—Indus Valley (from Leh to Upshi), Pangong Lake (Shushal and Tankse), Ladak, and Puga, Rupshu.

<sup>3</sup>Fauna Brit. India, 2nd ed., Birds, 2, p. 457, 1924.

Birds from Ladak agree with two, including the type, from Sukkur in wing-formula and length of first (spurious) primary, as correctly pointed out by Ticehurst (*Ibis*, 1922, p. 563). The second primary is equal to the ninth or tenth or is between these two, very rarely between the eighth and ninth, while in *P. t. tristis* (sens. lat.) it generally equals the eighth or falls between the seventh and eighth. The length of the first primary is somewhat variable, and while in the majority of the specimens of *sindianus* it exceeds the tip of the primary coverts by about 8-10 mm. (against  $5\frac{1}{2}$ -7, rarely 8, in *P. t. tristis*), one of our skins, ♂ ad. from Shimsa Kharbu, certainly does not differ therein from a breeding female of *tristis* taken by H. Seebohm on June 19, 1877 on the banks of the Yenisei, the distance between the tip of the primary coverts and the tip of the first primary measuring in both about  $5\frac{1}{2}$  mm.

An adult bird collected by N. Przewalski in May in the Russian (Keriya) Range and preserved in the Tring Museum is in every respect similar to the Ladak specimens, thus confirming Pleske's identification. A single adult male from Gilgit, March, 1880 J. Scully, in the same collection, is likewise an unquestionable *sindianus*, if the proportions of the two outer primaries are of any value.

Males from Kashmir and Ladak measure as follows: wing 56-61; tail 46-50.—One male from Gilgit: wing 60.—One male from Russian (Keriya) Range: 56 mm.

The breeding area of *P. t. sindianus* apparently extends from Gilgit and eastern Kashmir (Sonamarg, Baltal) throughout the Himalayas to Ladak and Rupshu,<sup>1</sup> stretching north to the Kuenlun (Karakash and Sanju rivers) and east to the Russian Range, in Chinese Turkestan. It may breed even in the mountains west of Yarkand, since Sharpe (p. 77) lists a specimen of "*P. tristis*" taken by F. Stoliczka at Pasrobat, on May 13, 1874.<sup>2</sup> In the breeding season it is exclusively found upwards of 8,000 feet altitude. It winters in Sind and Mesopotamia.<sup>3</sup> It is safer for the present to treat *P. tristis* as a distinct species, since we are told by Sushkin<sup>4</sup> that

<sup>1</sup>Whistler's record (*Ibis*, 1925, p. 168) of *P. collybita tristis* breeding in Lahul from Gondla to beyond Kyelang probably belongs also here.

<sup>2</sup>Unless it belongs to *P. collybita subsindianus* SARUDNY (*Mess. Orn.*, 4, No. 4, p. 269, Jan., 1914—Darwas Range), of which nothing is known beyond the description.

<sup>3</sup>There is no definite record for its occurrence in Russian Turkestan. The two specimens from Kopal and the Kirghiz steppe mentioned by Pleske (*Ornith. Ross.*, 2, Part 2, pp. 288, 290), both taken in migration time, cannot well be referable to *P. t. sindianus*, and are more likely to be aberrant *P. t. tristis*.

<sup>4</sup>List and Distribution Birds Russ. Altai etc., p. 72, 1925.

*P. tristis* and *P. collybita* live and breed together in northeastern Russia and Ural. There can, however, be no question that *P. siddhianus* is merely a slightly differentiated race of *P. tristis*.

**Phylloscopus nitidus viridanus** Blyth. Greenish Willow Warbler.

*Phylloscopus viridanus* BLYTH, Journ. Asiat. Soc. Beng., 12, (2), p. 967, 1843  
—“very numerous in the vicinity of Calcutta during the hiemal months, and likewise common in Nepal.”

CHINESE TURKESTAN, TIAN SHAN: Shatta, Tekes Valley, ♀ ad., Aug. 28, 1925.

This Warbler is widely diffused in eastern Europe and western Palaearctic Asia. Within the boundaries covered by this paper, it has been found breeding by various collectors in the valleys of the Tian Shan. It seems to be absent, except on migration, from the Tarim basin, but reappears in the mountains along its southern border, where Henderson (p. 220) met with it in August on the Arpalak River, while Scully (p. 148) noticed it in the same month among the tamarisk and willow bushes fringing the Sanju stream and along the banks of the Karakash River. In Kashmir and Ladak, too, it apparently breeds in some numbers. The Second Yarkand Mission (Sharpe, p. 80) collected specimens in August at Sonamarg, Baltal, and Kargil; Richmond (p. 478) records two adult males taken by W. L. Abbott late in July, 1891 in central Kashmir at an elevation of 11,000 feet; Mrs. Wathen (Journ. Bomb. Nat. Hist. Soc., 29, p. 698, 1923) found quite a number of these birds, on August 14 and 15, in a willow grove on the river near Dras at about 10,000 feet, and Bates (op. cit., p. 799, 1923) says that it breeds abundantly in the Vale of Kashmir from the Valley level to 10,000 feet or more. Meinertzhagen (Ibis, 1927, p. 419) also encountered the species in late summer at Skardu, Baltistan, and on the Srinagar-Gilgit road.

**Phylloscopus occipitalis occipitalis** (Blyth). Large Crowned Willow Warbler.

*Phyllopneuste occipitalis* (Jerdon MS.) BLYTH, Journ. Asiat. Soc. Bengal, 14, (2), p. 593, 1845—“southern India, where discovered by Mr. Jerdon.”

KASHMIR: Baltal (alt. 9,500 feet), two ♂♂ ad., May 23, 24, 1925.

The Large Crowned Willow Warbler breeds in abundance throughout the western Himalayas from the Afghan frontier (Safed Koh) to Spiti and Garhwal. It has also been found breeding at Artush, in the Chatkal-tau,<sup>1</sup> and in the Hissar Range, Zerafshan,<sup>2</sup> in Russian Turkestan.

<sup>1</sup>Pleske, Mém. Acad. Sci. St. Pétersb., 36, No. 3, p. 29, 1888.

<sup>2</sup>Carruthers, Ibis, 1910, p. 457.

**Phylloscopus inornatus<sup>1</sup> humei** (Brooks). Hume's Willow Warbler.

*Reguloides humei* BROOKS, Stray Feathers, 7, p. 131, 1878—Northwest India.

KASHMIR: Baltal (alt. 9,400 ft.), ♂ ad., Mar. 23, 1925.

CHINESE TURKESTAN, TIAN SHAN: Han Aulik, North Musart River, adult (unsexed), Aug. 19; Eidinka, North Musart River, ♂ ad., Aug. 21; Shatta, Tekes Valley, ♂ ad., Aug. 26; Agijas, Tekes Valley, ♀ imm., Sept. 3, 1925.

The Baltal bird agrees with others in corresponding plumage from Gilgit (May, 1878, J. Biddulph) and Sonamarg (June, 1896, J. Davidson) in the British Museum. Birds from the Tian Shan (Issik-kul; Tishkan; Jarkent) in the Tring collection are slightly duller, not quite so greenish above, have larger bills, and the first primary usually shorter. It remains to be seen whether the divergencies are really constant, as every one of these characters is subject to much variation in both *P. i. inornatus* and *P. i. humei*. The Baltal bird is remarkably like spring specimens from the upper Hwang Ho identified by Pleske<sup>2</sup> as *R. mandellii* Brooks, but has a decidedly shorter tail.

The Turkestan birds are identical with others in fresh fall plumage from Aksu (August 27) and Jarkent (September 5) in the Tring Museum.

*P. i. humei* breeds throughout the Tian Shan west to the Chatkaltau, in the Altai, and in the northwestern Himalayas, from the Afghan frontier (Safed Koh) to Kashmir, its summer home being between 7,000 and 12,000 feet. In the latter country, Abbott obtained it, according to Richmond (p. 476), in the Vale of Kashmir, north of Pir Panjal Range, and at Sonamarg in August and June respectively, while Sharpe (p. 79) records specimens obtained by the Second Yarkand Mission in August at Gaganghir, Sonamarg, and Baltal. A full account of its breeding habits in Kashmir, where he found it abundant, is given by Brooks in Hume's "Nests and Eggs

<sup>1</sup>There can be no question that *Regulus inornatus* BLYTH (Journ. Asiat. Soc. Beng., 11, (1), p. 191, 1842; idem, o. c., 12, (2), p. 964, 1843) is an earlier name for *Reguloides humei praemium* MATHEWS and IREDALE, 1915. See Ticehurst, Ibis, 1922, pp. 147-148, and Stresemann, Ornith. Monatsber., 32, pp. 17-18, 1924.

<sup>2</sup>Wiss. Res. Reisen Przewalski, 2, Birds, Part 2, p. 102, 1890.—At present it is impossible to verify Pleske's identification, owing to lack of adequate material. All of the Sikkim specimens, including Brooks's type, in the British Museum are in fresh fall plumage, while from the Hwang Ho but a few skins taken in spring are available. The single breeding bird from southern Tibet mentioned by Kinnear (Ibis, 1922, p. 513) is too much worn to be of any use for comparative purposes.

of Indian Birds" (1, pp. 262-267, 1889). It appears to be very rare and local in Ladak. Sharpe (o. c., p. 79) lists a single specimen taken on August 24, 1873, at Nurle in the Indus Valley, while Oberholser (p. 223) speaks of a fall bird, probably a migrant, secured by Abbott at Leh.

In the mountains along the southern border of the Tarim basin, it seems to breed in some numbers. Scully (p. 149) reports that a Warbler, identified by him as *Reguloides viridipennis*, but actually the present species as shown by Sharpe (p. 79), was common at 9,000 feet elevation in the small bushes at Tadlik, in the upper Sanju Valley, around the middle of August. Members of the Second Yarkand Mission also met with it in May and June in Sarikol, while Richmond (p. 582) lists a female taken by W. L. Abbott on July 29, 1893 near Sughet Karaul. It also breeds in the Hissar Range, Zerafshan, as recorded by Carruthers (Ibis 1910, p. 456).

**Locustella naevia straminea** Seeböhm. Eastern Grasshopper Warbler.

*Locustella straminea* (ex Severtzow MS.) SEEBÖHM, Cat. B. Brit. Mus., 5, p. 117, 1881—Etawah,<sup>1</sup> N. W. India (first description).

CHINESE TURKESTAN, TIAN SHAN: Shatta, Tekes Valley, ♂ ad., ♀ imm., Aug. 25, 26, 1925.

The eastern form of the Grasshopper Warbler breeds from the extreme east of European Russia (Ufa, Orenburg) through the Kirghiz steppe and Transcaspia to Turkestan, and winters in the plains of western India. In the Tian Shan, it appears to be widely diffused. Severtzow (Journ. Orn., 23, p. 175, 1875) indicates the species as breeding throughout the western and central parts of that mountain system, from the Chir-chik to the Issik-kul, while Merzbacher's party, according to Laubmann (p. 83), secured specimens in May and June at Narynsk.

Sushkin<sup>2</sup> has lately presented a short review of the geographic races of the Grasshopper Warbler.

**Acrocephalus arundinaceus zarudnyi** Hartert. Sarudny's Great Reed Warbler.

*Acrocephalus arundinaceus zarudnyi* HARTERT, Bull. Brit. Orn. Cl., 21, p. 26, Nov., 1907—Jarkent, Turkestan.

<sup>1</sup>I am afraid that Etawah—the only specified place mentioned by Seeböhm—will have to be accepted as type locality.

<sup>2</sup>Proc. Boston. Soc. N. H., 38, pp. 47-48, 1925.

CHINESE TURKESTAN: Maralbashi, two ♀♀ ad., July 25, 27; Conishar, six miles northeast of Aksu, ♂ imm., Aug. 7, 1925.

These specimens have been compared and, except for brighter coloration due to their fresher plumage, found identical with the type in the Tring Museum. The second primary is but slightly shorter than the third and decidedly longer than the fourth. They are very different from *A. stentoreus*, but very close to *A. a. arundinaceus*, from which they can hardly be distinguished by slightly more olivaceous, less rufescent upper parts.

The Great Reed Warbler, according to Scully (p. 146), breeds in the plains of Yarkand, where it is a seasonal visitant, arriving in March and leaving at the approach of the cold weather. Przewalski, as recorded by Pleske,<sup>1</sup> likewise found it abundant among the reeds of the Tarim Valley. It also breeds, though not very commonly, along the rivers in the Tian Shan. Its general range extends through Russian Turkestan and Transcaspia west to the Caspian Sea.

### *Hippolais caligata* (Lichtenstein). Booted Tree Warbler.

*Sylvia caligata* LICHTENSTEIN<sup>2</sup> in Eversmann, Reise von Orenburg nach Buchara, p. 128, 1823—"am Ilek am 2. Mai erlegt."

CHINESE TURKESTAN: Maralbashi, Kashgar River, ♀ ad., July 27, 1925.—Wing 61 mm.

This bird appears to be referable to *H. caligata*. The second primary falls between the sixth and seventh, and the tail is conspicuously rounded, the external rectrix being about 5 mm. shorter than the longest (central) one. The first primary is very slightly longer than usual, exceeding the tip of the primary coverts by 8 mm. The upper parts are decidedly more brownish, and the flanks more strongly washed with buffy than in *H. rama*.

As far as I am aware, this is the first record of the species from the Tarim basin, although Severtzow (1875, p. 176) had found it in the western part of the Tian Shan. It will be remembered that both Scully (p. 147) and the naturalists of the Second Yarkand Mission (Sharpe, p. 74) obtained the allied *H. rama* at Yarkand, Karghalik, and other localities in the Tarim basin.

### *Sylvia nisoria merzbacheri* Schalow. Merzbacher's Barred Warbler.

*Sylvia nisoria merzbacheri* SCHALOW, Ornith. Monatsber., 15, p. 3, 1907—Kashkasu, Tian Shan (type in Munich Museum examined).

<sup>1</sup>Wiss. Res. Reisen Przewalski, 2, Birds, Part 2, p. 125, 1890.

<sup>2</sup>See Stresemann, Ornith. Monatsber., 36, pp. 51-52, 1928.



CHINESE TURKESTAN: Echitgo (Carshamba Bazar), Yarkand River, ♂ ad. (breeding), ♀ juv., July 17; Maralbashi, Kashgar River, ♂ ad., ♂ juv., ♀ juv., July 25, 27, 29, 1925.

The adults, when compared with others from Hungary, Roumania, and Germany (near Leipzig), are paler above, notably on the pileum, and have more extensive white markings on the lateral rectrices as well as larger bills. A single male from Urfa, Mesopotamia, agrees in pale coloration, but the bill is small and the white in the tail is restricted as in European examples. There is, no doubt, a tendency to greater size in Asiatic birds, though the divergency is not quite constant.

While not strongly marked, *S. n. merzbacheri* appears to be separable<sup>1</sup> subspecifically from the Barred Warbler, although its exact distribution has yet to be worked out.

In the Tarim basin, it is a summer visitor, arriving in May and departing again in September on its southward migration. Scully (p. 149) found it breeding in rose and thorn bushes around Yarkand, and the Second Yarkand Mission, as recorded by Sharpe (p. 74), also obtained specimens, nests, and eggs at Kisil, Karghalik, and Yarkand. Przewalski, according to Pleske,<sup>2</sup> noted the Barred Warbler in small numbers in the oasis of Niya towards the end of May.

Merzbacher and Almásy met with it in the Naryn Valley and in the vicinity of the Issik-kul, and Severtzow (1875, p. 76) mentions it as nesting in the cultivated valleys throughout the whole Tian Shan system. Its winter quarters are unknown.

### *Sylvia communis rubicola* Stresemann. Turkestan Whitethroat.

*Sylvia communis rubicola* STRESEMANN, Journ. Orn., 76, p. 378, 1928—Kuldja, Chinese Turkestan.

CHINESE TURKESTAN, TIAN SHAN: Shatta, Tekes Valley, three ♂♂ (first winter), one ♂ juv., Aug. 23, 24, 28; Ox-su River, Tekes Valley, ♂ (first winter), Aug. 30; Agijas, Tekes Valley, ♀ (first winter), Sept. 2, 1925.

Dimensions of these specimens are markedly larger than in a series from Urfa, northern Mesopotamia, which I take to represent *S. c. icterops* Ménétr. The wings measure 74, 75, 76, 76 in the males, and 75, 78<sup>3</sup> in the females, against 68 to 72 in the Urfa birds. Six additional skins from the Tian Shan in the Munich Museum have wings of 75 to 79 mm., thus corroborating the difference.

<sup>1</sup>See also Snigirewski, Journ. Orn., 76, p. 597, 1928.

<sup>2</sup>Wiss. Res. Reisen Przewalski, 2, Birds, Part 1, p. 76, 1889.

<sup>3</sup>Perhaps wrongly sexed.

*S. c. rubicola* breeds throughout the whole Tian Shan, from the Ala-tau, Chatkal-tau, and the Ferghana Range in the west to the Barkul Range in the extreme eastern section.<sup>1</sup> Birds from the Altai probably belong to the same form. It does not breed in the Tarim basin, though Przewalski<sup>1</sup> found it on migration, very early in May, near the foot of the Russian Range.

***Sylvia curruca minula* Hume. Small Whitethroat.**

*Sylvia minula* HUME, Stray Feathers, 1, p. 198, 1873—"Bhawulpore, Yarkand, Jhansie,<sup>2</sup> and Sindh;" no type locality specified.

CHINESE TURKESTAN: Aksak-märal, Kashgar River (near Maralbashi), ♂ ad. (worn breeding), July 21; Maralbashi, ♂ juv., July 24; Yaka-kuduk, northeast of Maralbashi, ♂ ad., Sept. 23; Kashgar, ♀ ad., Oct. 6, 1925.

The specimens are identical with others in the Tring Museum from the same general region (Tarim River and Russian Range, coll. Przewalski; River Moldja, coll. M. W. Pewtsov). The wing formula is somewhat variable, the second primary being either between the sixth and seventh, or equal to the seventh, or between the seventh and eighth. In dimensions (wing of males 60-64, of females 60-62) and coloration they are, however, quite constant, being altogether much paler above, lighter gray on the crown and more sandy brown on the back, than *S. c. affinis*.

*S. c. minula* obviously is the only form of Lesser Whitethroat breeding in the Tarim basin and the surrounding hills.<sup>3</sup> The Second Yarkand Mission (Sharpe, p. 76) met with it in May and June at Ighiz Yar, Karghalik, and Kugiar, and Stoliczka found it common at Beshterek, where nests with eggs were taken on May 31st. Henderson and Hume (p. 221) no doubt had this form in mind when recording "*S. curruca*" as abundant in Yarkand, and the same remark applies to Scully (p. 150), who mentions "*S. curruca*" as being common in the plains of Kashgaria, arriving about April and migrating southward toward the end of October. Przewalski, as reported by Pleske,<sup>4</sup> lists this Warbler as breeding in the Tarim Valley, and noticed it during migration time, both in spring and autumn, at numerous localities along the northern base of the Kuenlun between

<sup>1</sup>See Pleske, *Wiss. Res. Reisen Przewalski*, 2, Birds, Part 1, p. 78, 1889.

<sup>2</sup>In a later communication (*Stray Feathers*, 7, pp. 60, 62, 1878), Hume points out that the Jhansie specimen belongs to *S. althaea*.

<sup>3</sup>Sharpe (p. 76) refers a specimen obtained by Henderson (about the middle of August) at Koshtagh to *S. c. affinis*. Mr. Kinnear, while confirming the identification, writes that the date is Sept. 10, 1870, which suggests that the bird was a migrant from the north.

<sup>4</sup>*Wiss. Res. Reisen Przewalski*, 2, Birds, Part 1, p. 80, 1889; Part 2, p. 81, 1890.

the Khotan and Cherchen Darya as well as in the Nan Shan.<sup>1</sup> The example from the south foot of the Tian Shan (between Kucha and Karashar) mentioned by Laubmann (p. 88) as *S. c. affinis* proves, on reexamination, to be referable to *S. c. minula*. In the Tring Museum, I have seen specimens obtained by Przewalski in the Russian Range (May) and on the Tarim River (April), and others taken by M. Pewtrow in June on the Rio Moldja (Moldsha), at the northern base of the Astun-tagh.

According to Severtzow (Ibis, 1883, p. 67) and Pleske,<sup>2</sup> *S. c. minula* also breeds in large numbers in the Ferghana Valley and along the Sir Darya.<sup>3</sup> A series in the Tring Museum from this region, comprising specimens secured by Baron Loudon in Bokhara (Farab, Amu Darya) and by T. Barey in Ferghana (Isfairam, Alai) early in April, appear to be indeed indistinguishable from those of the Tarim basin.

*S. c. minula* winters in western India, Makran, and parts of Persia.

### ***Sylvia curruca affinis* (Blyth). Indian Lesser Whitethroat.**

*Curruca affinis* BLYTH, Journ. Asiat. Soc. Beng., 14, (2), p. 564, note, 1845—Southern India.<sup>4</sup>

CHINESE TURKESTAN: Kashgar, ♂ ad., Oct. 6, 1925.—Wing 70 mm.

This bird, in fresh fall plumage, is larger with stronger bill and much darker, browner above than the specimens referred to *S. c. minula*, and agrees with a series from Jarkent (August and September) in the Tring Museum and others from Narynsk, Tian Shan (August) in the Munich Collection. It is doubtless a migrant from the north.

*S. c. affinis* breeds in Siberia and possibly in parts of Turkestan, although its distribution during the nesting season in the latter country is far from being well understood. The Tring Museum has six specimens collected by N. Sarudny, on May 9 and 10 on the River Tishkan, and a large series from near Jarkent, taken in April,

<sup>1</sup>Ticehurst (Journ. Bomb. Nat. Hist. Soc., 31, p. 699, 1926) refers birds "from Zaidam, Alashan, and others obtained by Prevalsky (sic) in Turkestan" to *S. c. halimodendri* SUSHKIN, but this can hardly be correct.

<sup>2</sup>Ornith. Ross., 2, pp. 104-105.

<sup>3</sup>Birds from the lower Sir Darya have lately been separated as *S. c. jaxartica* SNIGIREWSKI (Journ. Orn., 77, p. 258, 1929).

<sup>4</sup>Jerdon who sent the types to the Calcutta Museum states (Birds India, 2, p. 209, 1863) that "he found it in the Carnatic, at Jaulnah, and other parts of the Deccan, and also at Mhow, but not further east." Brooks (Stray Feathers, 2, p. 332, 1874; o. c., 3, p. 272, 1875) examined the types and found them to belong to the eastern race with short second primary.

August, and September. The majority are clearly referable to *affinis*, the darkest examples being fully as intensely colored as winter birds from India (Cawnpore). Others, particularly an adult male from Jarkent (April 9, 1900), however, closely approach *S. c. minula* in paleness of upper parts. The Simpson-Roosevelt Expedition obtained a similar specimen—adult male—on the same day and at the same locality (Kashgar) as the one listed above. For the present it must remain doubtful whether they represent merely individual variants of *affinis*, or intergrades to *minula*, or a recognizable race of unknown breeding range, combining the size of the former with the coloration of the latter.<sup>1</sup> It will be remembered that Stolzmann (p. 72) tentatively proposed the name *S. margelanica* for two migratory individuals of similar characters secured by T. Barey at Margelan, Ferghana.

Pleske (1888, p. 30) records *S. c.* var. *affinis* from the Chatkal-tau (April and August), while Laubmann (p. 88) refers birds obtained by G. Merzbacher in the latter half of August near Narynsk, Tian Shan, to the same race. Reexamination of these skins in the Munich Museum serves to substantiate his identification.

In the Tarim basin, *S. c. affinis* apparently occurs only on passage, when on the way to its winter quarters in India. Oustalet (1893, p. 175) lists a single example obtained by Bonvalot and Prince Orléans, on October 13, 1889 near the Kansai Darya, in the Lob Nor region, and Henderson obtained two specimens at Oi Tograk and Koshtagh in September, 1890, as I am informed by Mr. Kinnear, of the British Museum.

### *Sylvia althaea althaea* Hume. Hume's Lesser Whitethroat.

*Sylvia althaea* HUME, Stray Feathers, 7, pp. 60, 62, 1878—Jhansi, Deesa, "Ahmednuggur" [=Ahmadnagar], "Bhawulpur" [=Bahawalpur], and Ramoo, "Cashmeer"; no type locality specified.<sup>2</sup>

LADAK: Panamik, Nubra, three ♂♂ ad., one ♀ ad. (breeding), June 11, 12, 13, 1925.

Thanks to the courtesy of Dr. Richmond, eight additional specimens from Dr. W. L. Abbott's collection are before me as follows: Vale of Kashmir, ♂ ad., June 1; ♀ ad. (with nest and eggs), May 18;

<sup>1</sup>Stolzmann (Bull. Soc. Natur. Moscou, nouv. sér., 6, pp. 398-399, 1892) discusses the variation in twelve specimens from Transcaspia of what he calls *S. garrula affinis*. However, one of the skins (from Tedjen, Feb. 26, 1890), now in the Tring Museum, appears to be *S. c. minula*.

<sup>2</sup>When describing *S. althaea*, Hume had five specimens before him. The four first-named localities being in the winter range of the species, we propose to accept Ramoo, Kashmir, as type locality.

Lolab Valley, Kashmir, three ♂♂ ad., April 20, May 12, and July 10; Nowboog Valley, eastern Kashmir, ♂ ad., June 2; Shyok River, two ♀♀ (juvenile plumage), July 15. Besides, I have seen a series of breeding birds from Ladak and Baltistan (Skardu) in Col. Meinertzhagen's collection, and other Ladak specimens obtained by Osmaston in the British Museum. All of them are unquestionably *S. althaea*. The various breeding records of *S. curruca affinis*<sup>1</sup> from Kashmir and Ladak are doubtless due to confusion with *S. althaea*, which is evidently the only form of Lesser Whitethroat nesting in northwestern India. In the east, it does not seem to extend much beyond the Shyok Valley, Ladak, there being no record from either Spiti, Kulu, or Lahul. Judging from specimens in the British Museum secured by Scully and Biddulph in May, July, and August, it is the present species, and not *S. c. affinis*, that breeds in Gilgit,<sup>2</sup> and I expect the same will prove to be the case in the Kurram Valley in spite of Whitehead's contrary assertion.<sup>3</sup> *S. althaea* also breeds in the juniper forests of northeastern Baluchistan,<sup>4</sup> in Afghanistan,<sup>5</sup> and has been met with during the nesting season in parts of Russian Turkestan. Pleske (1888, p. 30) lists specimens from the Chatkal-tau (Saamin, May 30; Kshtut, July 3; Iskander-kul, July 18) and mentions<sup>6</sup> others taken at the end of May and in June in eastern Bokhara (Baldjuan, Karnak, Ishtium, Karategin), while Stolzmann (1897, p. 71) states that *S. althaea* was secured by T. Barey in June at Zordali and Kara-karyk in the Alai Range, Ferghana.<sup>7</sup>

*S. althaea* bears such a striking resemblance to the *S. curruca*

<sup>1</sup>See Sharpe (p. 75; Jhelum Valley, Kangan, Gaganghir, Kargil, Shargol); Ward (Journ. Bomb. Nat. Hist. Soc., 17, p. 112, 1906—Kashmir and Baltistan); Whistler (o. c., 28, p. 994, 1922—round Srinagar); Bates (o. c., 29, p. 798, 1923—Wular Lake and Liddar Valley, Kashmir); Osmaston (o. c., 31, p. 990, 1927—Kashmir and Ladak).—Since this was written, Mr. Kinnear tells me that the birds from Kangan and Gaganghir mentioned by Sharpe are indeed *S. a. althaea*.

<sup>2</sup>See Scully, Ibis, 1881, p. 450.—Biddulph (Ibis, 1881, p. 67) appears to have confused his notes when asserting that *S. c. affinis* was the breeding form and *S. althaea* a mere transient in Gilgit. In a later communication (Ibis, 1882, p. 279), he claims to have received *S. c. affinis* from Darel, which requires confirmation, as the specimens are not in the British Museum.

<sup>3</sup>Ibis, 1909, p. 122.—No breeding birds in the British Museum (Kinnear, in litt.).

<sup>4</sup>Ticehurst, Journ. Bomb. Nat. Hist. Soc., 31, p. 698, 1926.

<sup>5</sup>*S. affinis* W. RAMSAY, Ibis, 1880, p. 59.—Mr. Kinnear (in litt.) tells me that two specimens from Byan Kheyl, May 26 and 27, 1879 (the latter shot off the nest), are clearly *S. a. althaea*.

<sup>6</sup>Ornith. Ross., 2, p. 101.

<sup>7</sup>Laubmann's record (p. 87) from the south foot of the Tian Shan (between Kucha and Karashar) can hardly belong here. Unfortunately, I omitted to reexamine the specimen when in Europe last year.

group that one is tempted to regard it as subspecifically related. However, our knowledge of the ranges of *S. althaea* and *S. c. affinis* in Russian Turkestan and Baluchistan, where both are said to breed, is far too incomplete to admit of final conclusions. Moreover, a western race, *S. althaea caucasica*, has been described from Transcaucasia and northern Persia, where a form of *S. curruca* is known to breed, too.

**Rhopophilus pekinensis albosuperciliaris** (Hume). White-browed Bush Dweller.

*Suya albosuperciliaris* HUME in Henderson and Hume, Lahore to Yarkand, p. 218, pl. 18, 1873—Koshtak, Kilian River, Yarkand Plains.

CHINESE TURKESTAN: Alager, Kashgar River (near Maralbashi), ♀ ad., July 21; Yaka-kuduk, ♂ ad., Sept. 23, 1925.

The July bird is in badly worn breeding plumage, while the male taken in September, which I have compared and found identical with the type in the British Museum, is just finishing its annual molt. Thanks to the courtesy of Dr. C. W. Richmond, I have been enabled to examine two more specimens, adult male and female, secured by Dr. W. L. Abbott at Pichak Sindi, east of Maralbashi, in December, 1893.

*R. p. albosuperciliaris* is peculiar to the Tarim basin, ranging east to the Bagrash-kul and Lob Nor. George Henderson, its discoverer, shot a single specimen on September 10, 1870 at Koshtak, on the Kilian River, southeast of Yarkand. Scully (p. 147) found it tolerably common in the plains, where it is stated to be a permanent resident, and collected adult and young birds near Yarkand on June 16 and 17, 1875. Majev, as recorded by Menzbier (p. 354, *R. deserti*), obtained specimens in the middle of October in the bushes along the Taushkan Darya, at Uchturfan and Jaman-su, near the southern foot of the Kokshal-tau. Przewalski, as we are told by Pleske,<sup>1</sup> met with it in the valley of the Chaidyk-gol, on the south side of the Tian Shan, and all along the Tarim River south to the Lob Nor. The Second Yarkand Mission, according to Sharpe (p. 81), encountered it at Sanju and Oi Tograk, along the northern base of the Kuenlun, and also at Maralbashi and Aioksogon amongst high grass. Oustalet (1893, p. 201) records a female secured by Prince Orléans's party at Akdagash, on the banks of the lower Tarim halfway between Kurla and Chaklik, on October 10, 1889,<sup>2</sup>

<sup>1</sup>Wiss. Res. Reisen Przewalski, 2, Birds, Part 2, p. 131, 1890.

<sup>2</sup>The couple from "Batasoumbo" [=Pata-sumdo], southeastern Tibet, can hardly belong to the same form, and should be reexamined.

while Richmond, in his report on W. L. Abbott's collection (p. 582), lists a couple from Pichak Sindi, December, 1893, and an adult male from the junction of the Aksu and Kashgar rivers, November 29, 1893.

When compared with typical *R. p. pekinensis*, from Peking and Mongolia, the present form looks almost too different to be treated as a race of it. In addition to its somewhat greater dimensions, it has a much heavier bill, much more buffy (light avellaneous instead of light drab) ground color of the upper parts with pale buffy brown (instead of hair brown) wings and central tail feathers, and much less prominent as well as paler (cinnamon rather than deep tawny) streaking on the lateral under parts.

Birds from Zaidam, however, are decidedly intermediate, combining, as they do, the pale general coloration and dimensions of *albosuperciliaris* with the strongly pronounced, deep tawny flank-streaking of *pekinensis*. This having also been noticed by Pleske (o. c., p. 129), there can be little doubt that the Zaidam birds constitute a separable form. Its proper name is *R. pekinensis major* Przewalski.

**Turdus viscivorus bonapartei** Cabanis. Himalayan Mistle Thrush.

*Turdus bonapartei* CABANIS, Journ. Orn., 8, p. 183, 1860—Himalaya.

CHINESE TURKESTAN, TIAN SHAN: North Musart River, ♂ ad. (in annual molt), September 13, 1925.—Wing 168 mm.

The eastern race of the Mistle Thrush is a common breeding bird in the mountain forests of the Tian Shan. Severtzow (1875, p. 178) lists it as generally distributed from the Ala-tau and Chatkal-tau east to the Issik-kul; Almásy (see Smallbones, p. 413) found it nesting in the middle forest belt of the Terskei Ala-tau; Przewalski<sup>1</sup> in the valleys of the Zanma [=Tsangma], Kunges, and again on the northern slopes of the eastern Tian Shan between Barkul and Hami; Kollibay (1917, p. 449) records birds taken in May and June at Pskem and Narynsk. Besides, it breeds in Ferghana (Alai, Ferghana Range), Samarkand (Hissar Range), the Pamir, northern Baluchistan, in the western Himalayas, from the Afghan frontier east to Nepal. It does not occur in the plains of the Tarim basin.

Birds from Turkestan are absolutely identical with a series from the Himalayas, the length of the wing varying between the same limits (160 to 172 mm.).

<sup>1</sup>See Pleske, Wiss. Res. Reisen Przewalski, 2, Birds, Part 1, p. 3, 1889.

**Turdus ruficollis atrogularis** Temminck. Black-throated Thrush.

*Turdus atrogularis* TEMMINCK, Man. d'Orn., 2nd ed., 1, p. 169, 1820—  
 “. . . rarement en Autriche et en Silésie, plus commun en Hongrie  
 et en Russie. . .”

CHINESE TURKESTAN, TIAN SHAN: Agijas, Tekes Valley, ♀ ad., Sept. 5,  
 1925.

The center of the breeding range of the Black-throated Thrush is western Siberia, but it also nests in small numbers in the Tian Shan. In addition to Severtzow's general record (1875, p. 178) for the western districts, Almásy states, as reported by Smallbones (p. 413), that it breeds rarely in the old poplar groves near Ilysky, more abundantly around the Issik-kul.

On migration, it is common along the rivers of the Tarim basin, where it was met with both by Przewalski and Prince Orléans's party (Oustalet, 1893, p. 149), while Scully (p. 140) tells us that a good many spend even the winter in the plains of Yarkand and Kashgaria. The Second Yarkand Mission (Sharpe, p. 92) also found this thrush in winter at various localities in the Yarkand plains.

**Turdus merula intermedius** (Richmond). Turkestan Blackbird.

*Merula merula intermedia* RICHMOND, Proc. U. S. Nat. Mus., 18, p. 585,  
 1896—Aksu, eastern Turkestan.

CHINESE TURKESTAN, TIAN SHAN: Agijas, Tekes Valley, two ♂♂, one ♀  
 (all in juvenile plumage), Sept. 4, 5, 1925.

Much larger (wing 132-137 mm.) than specimens in corresponding plumage from various parts of Europe, and agreeing with the measurements of winter birds from Narynsk and Tashkent.

Although Severtzow (1875, p. 178) lists the Blackbird as a permanent resident throughout the Tian Shan from the Kara-tau and Sir Darya to Kopal and the Issik-kul, I cannot find any other breeding record from our region. Richmond described the present race from an adult female obtained by W. L. Abbott near Aksu on November 20, 1893. A second example of the same sex was taken, a few days later, at Karatol. Scully (p. 139) who secured specimens at Yarkand in February, tells us that the Blackbird migrates northwards in spring, repairing to the hills and the country about Maral-bashi, where it is said to breed.

Schalow (1908, p. 249) mentions both "*M. m. merula*" and "*M. m. maxima*" as occurring in the Tian Shan. It is, however, pretty certain that the records of the earlier authors (Menzbier, Bianchi, Pleske), to which he refers, all belong to *T. m. intermedius*,



the only representative of the Blackbird in Turkestan. The larger *T. m. maximus* is evidently restricted to the northwestern Himalayas (Kashmir, Kurram, and N. W. Frontier Province), while another race of equally large size, but with a smaller bill, *T. m. buddae* Meinertzhagen,<sup>1</sup> takes its place in alpine Sikkim and southern Tibet.

**Monticola cinclorhyncha** (Vigors). Blue-headed Rock Thrush.

*Petrocincla cinclorhyncha* VIGORS, Proc. Comm. Sci. Corresp. Zool. Lond., 1, "1830-31," p. 172, pub. March 2, 1832—Himalayas; = Simla-Almora district (see Ticehurst and Whistler, Ibis, 1924, p. 471).

KASHMIR: Baltal (alt. 9,500 ft.), ♂ ad., May 23, 1925.

Widely diffused in the Himalayas from the Afghan frontier to Darjeeling. Richmond (p. 488) records a male from the Lolab Valley; Biddulph, according to Sharpe (p. 94), obtained specimens at Sonamarg; and Osmaston (Journ. Bomb. Nat. Hist. Soc., 31, p. 985, 1927) states that, while not a common bird in Kashmir, it is widely distributed both on the Pir Panjal and Himalayan slopes in rather open forest between 6,000 and 10,000 feet. It is not found in Ladak.

**Monticola solitaria pandoo** (Sykes). Indian Blue Rock Thrush.

*Petrocincla pandoo* SYKES, Proc. Comm. Sci. Corresp. Zool. Soc. Lond., 2, "1832," p. 87, pub. Oct., 1834—"in the dense woods of the Ghauts," Dukhun.

LADAK: Chunagund (alt. 9,000 feet), Dras-Shigan River, ♂ ad., May 27, 1925.

The Indian Blue Rock-Thrush breeds in the Himalayas from Afghanistan east to Sikkim and southern Tibet, extending north to Turkestan (Ferghana, Tian Shan) and west into the hills of northern Baluchistan and Sind (Khirthar Range). According to Osmaston (Ibis, 1925, p. 686) and Meinertzhagen (Ibis, 1927, p. 579), it is fairly abundant between 5,500 and 13,500 feet in suitable localities throughout the Indus and Shyok valleys in Ladak. Henderson (p. 190) records it from Leh and Shergol; Sharpe (p. 94) from Dras, Kharbu, and Leh; Richmond (p. 488) from Sonamarg, Kashmir, and the Dras Valley; Oberholser (p. 222) from Saspul, on the Indus, Ladak. Bates (Journ. Bomb. Nat. Hist. Soc., 29, p. 799, 1923) found it nesting on the shore of Wular Lake in Kashmir. Babault (p. 180) lists it for the Simla Hills, Kulu, and Lahul, and Whistler encountered it in small numbers in the two last-named countries as well as in Spiti.

<sup>1</sup>Bull. Brit. Orn. Cl., 46, p. 98, 1926—Gyangtse, southern Tibet.

**Myiophonus horsfieldi temminckii** (Vigors). Himalayan Whistling Thrush.

*Myiophonus Temminckii* VIGORS, Proc. Comm. Sci. Corresp. Zool. Soc. Lond., 1, "1830-31, p. 171, pub. March 2, 1832—Himalayas; = Simla-Almora district (see Ticehurst and Whistler, Ibis, 1924, p. 471).

KASHMIR: Gund (alt. 7,000 ft.), ♂ ad., May 21; Baltal (alt. 9,400 ft.), ♂ (first annual), May 23, 1925.

The Himalayan Whistling Thrush, widely distributed in the Himalayas, is reported to be abundant in Kashmir. In Ladak it is restricted to the extreme western section, being found along the streams draining the northeast slope of the Great Himalayan barrier. Osmaston (Ibis, 1925, p. 686) records it from the Dras and Suru valleys, and Meinertzhagen (Ibis, 1927, p. 580) likewise met with several individuals between Kargil and Skardu, the species, according to the same authority, becoming very common as lower levels are reached. Richmond (p. 492) lists a specimen from Rondu, Bal-tistan.

In Turkestan it is replaced by a somewhat larger form, *M. h. turcestanicus* Sarudny.

**Oenanthe oenanthe argentea** (Lönnerberg). Eastern Wheatear.

*Saxicola oenanthe argentea* LÖNNBERG, Ark. Zool., 5, No. 9, p. 22, 1909—Kjachta and Kiran, Mongolia.

CHINESE TURKESTAN, TIAN SHAN: Shatta, Tekes Valley, ♂ ad., ♀ ad., Aug. 28, 1925.—Wing (male) 101, (female) 95 mm.

The male has no more white on the forehead than certain European specimens, but its wings are rather long, though even in that respect it is matched by another from Thurbstone, England. The female cannot be distinguished either in size or color from Swedish examples. Meinertzhagen (Ibis, 1922, p. 16) believes that the characters of the supposed eastern race are too inconstant to justify its separation, and we are inclined to agree with him. Ticehurst (Journ. Bomb. Nat. Hist. Soc., 31, p. 103, 1926), however, advocates the discrimination of an Asiatic race, for which he uses Hemprich and Ehrenberg's term *rostrata*. Without large series of breeding birds, it will be hard to definitely settle this much disputed question.

The Wheatear is widely distributed in the Tian Shan, according to Severtzow (1875, p. 178). Breeding birds were also recorded by Schalow (1908, p. 251) from the region around Issik-kul, and by Laubmann (p. 92) from Narynsk.

**Oenanthe deserti atrogularis** (Blyth). Eastern Desert Chat.

*Saxicola atrogularis* BLYTH, Journ. Asiat. Soc. Beng., 16, (1), p. 131, in text, 1847—"common in the Upper Provinces, Scinde, etc."

CHINESE TURKESTAN: Abad, ♀ ad., ♀ (in juvenile molt), Aug. 13; Kihil Bulok, (♀) ad., Sept. 17; Shurbulak Pass, ♀ ad., Nov. 1, 1925.

Compared with a good series from Egypt, these birds differ by somewhat larger size and deeper, more brownish coloration. As far as dimensions and restricted amount of white edging along the inner web of the remiges are concerned, all of the specimens are typical *atrogularis*, and show not the least approach to *O. d. oreophila*.

The female from Abad, still wearing part of the fluffy juvenile plumage, proves that this Chat breeds at the southern foot of the Tian Shan. An adult male, obtained by W. L. Abbott on Sept. 11, 1893 at Chong Terek Village (alt. 7,000 ft.) in the Tian Shan, north of Kashgar, and recorded by Richmond (p. 584) as *S. montana*, is a typical specimen of *atrogularis*, to which birds from Narynsk in the Munich Museum likewise belong.

In the plains of the Tarim basin, no wheatear of this group appears to be nesting, but in the hills bounding it on the south we meet again with a representative form. Henderson and Hume (p. 205, *S. atrogularis*) record it as breeding in the Karakash Valley; Scully (p. 143, *S. deserti*) found it in the desert ground between Sanju and Karghalik as well as between Shahidullah and Gulgunshah in the Karakash Valley at elevations ranging from 4,500 to 12,000 feet; the Second Yarkand Mission (Sharpe, p. 85, *S. montana*) obtained specimens at Karghalik and Kugiar; and Richmond (p. 584), in his report on Abbott's collection, lists it under the same name from Kilian (alt. 7,000 ft.) and Sughet Pass (13,000 ft.).

Thanks to Dr. Richmond's courtesy, I have been permitted to reexamine the three skins, and refer them unhesitatingly to *O. d. oreophila*, although those from Kilian have perhaps not quite so much white in the wing as those from higher altitudes. Pleske<sup>1</sup> also assigns birds from the Khotan-tagh and Russian Range to "*S. montana*," and his measurements closely agree with those of Ladak specimens. I do not understand why Hartert<sup>2</sup> should be so reluctant to admit the distinctness of this form, which, as pointed out by Ticehurst (*Ibis*, 1922, pp. 155-158) and more recently by Meinertzhagen (*Ibis*, 1927, p. 581), possesses perfectly good characters of its own and enjoys a separate range, both in the breeding season and

<sup>1</sup>Wiss. Res. Reisen Przewalski, 2, Birds, Part 1, p. 41, 1889.

<sup>2</sup>Vög. Pal. Fauna, Nachtrag 1, pp. 58-59, 1923.

in winter. Sixteen birds from Ladak, Rupshu, and Lahul, examined by us in the U. S. National Museum and the Paris Museum fully substantiate its validity. Two breeding males from the Tagdumbash Pamir, alt. 12,000 feet (May 1, and June 17, 1894), are likewise typical *oreophila*.

**Oenanthe isabellina** (Cretzschmar). Isabelline Chat.

*Saxicola isabellina* CRETZSCHMAR, Atlas zu Rüppells Reise im nördlichen Afrika, Vögel, p. 52, pl. 34, fig. b, "1826"—Dongola, Nubia.

CHINESE TURKESTAN, TIAN SHAN: Shatta, Tekes River, ♂ ad., Aug. 23, 1925.

This as well as other specimens from Turkestan seem to agree with an Egyptian series in Field Museum.

The Isabelline Chat, which is widely diffused throughout Palaearctic Asia from southern Russia east to northern China, is common in Turkestan. According to Scully (p. 142), it is a summer resident in the plains of the Tarim basin, at elevations of from 4,000 to 6,300 feet, from the middle of April to the middle of August. It frequents waste ground on the borders of cultivation, and breeds around Yarkand in April and May. It also nests in the Tian Shan, as we are told by Severtzow (1875, p. 178), Smallbones (p. 413), Schalow (1908, p. 252), and Laubmann (p. 94).

I do not know on what authority Baker's<sup>2</sup> statement is based that this bird breeds in "northeastern Kashmir and Ladak." Ward's note (1906, p. 481), "has been found in Baltistan," is too indefinite to be of any value.

**Oenanthe pleschanka pleschanka** (Lepechin). Pied Chat.

*Motacilla pleschanka* LEPECHIN, Nov. Comm. Acad. Sci. Petrop., 14, p. 503, pl. 24, 1771—Saratow, southern Russia.

CHINESE TURKESTAN: Yaka-kuduk (near Maralbashi), ♂ juv., Sept. 23; Oku Mazar (near Maralbashi), ♂ juv., Sept. 25; Shurbulak Pass, west of Kashgar, ♀ ad. Nov. 1, 1925.

I have no topotypical material to compare with, but birds from Transcaspia and Russian Turkestan are apparently inseparable from those of the Tarim basin. *Saxicola hendersoni* Hume<sup>3</sup> was

<sup>1</sup>Probably published much later (see Zimmer, Field Mus. Nat. Hist., Zool. Ser., 16, p. 535, 1926).

<sup>2</sup>Fauna Brit. India, 2nd ed., Birds, 2, p. 50, 1924.

<sup>3</sup>Ibis, (3), 1, p. 408, 1871—"collected during the Yarkand Expedition" by Dr. Henderson; the types came from the Arpalak River (near Sanju) and Kosh-tagh, southern border of the Tarim basis (see Hume and Henderson, Lahore to Yarkand, p. 206).

obviously based on the fall plumage,<sup>1</sup> and the plate of the male in "Lahore to Yarkand" (pl. 13) agrees minutely with the Yaka-kuduk specimen of that sex in the collection. According to Scully (p. 144), who recorded it under Hume's name from the country between the Kilian and Sanju rivers, this chat breeds in Kashgaria. Pleske, in his memoir on Przewalski's collection,<sup>2</sup> cites numerous localities from the Tarim basin, where the species seems to be pretty common during migration, and states that it prefers the mountain valleys and foothills as nesting ground. In the Tian Shan, Almásy, as reported by Smallbones (p. 413), found it breeding in the steppe along the south shore of the Issik-kul, and it doubtless occurs in other suitable places. It also breeds in the extreme northwest of British India. Biddulph (*Ibis*, 1882, p. 277) records a nest with five hard-set eggs, taken in Astor, on June 26, at an elevation of 7,000 feet; Richmond (p. 480) lists specimens obtained by W. L. Abbott at Kargil and Pashgam on June 24 and 25, 1893; Ward (1908, p. 462) reports on a pair seen building at Kargil on May 28; and Meinertzhagen (*Ibis*, 1927, p. 582) found it quite common in August all the way from Kargil to Skardu in Baltistan. Kashmir birds, as pointed out by Richmond, are smaller than those from Turkestan and may be separable subspecifically, in which case one of the several names bestowed on winter birds from Arabia or Africa might be found to be applicable.

### *Saxicola torquata indica* (Blyth). Indian Stone Chat.

*Pratincola indica* BLYTH, *Journ. Asiat. Soc. Beng.*, 16, (1), p. 129, 1847—India.

KASHMIR: Gund (alt. 7,000 ft.), ♀ ad., May 21, 1925.

CHINESE TURKESTAN, TIAN SHAN: Shatta, Tekes River, ♀ (juvenile plumage), Aug. 24; Ox-su River, Tekes Valley, one ♂, two ♀♀ ad., Aug. 29; Simtash, above Agijas Canyon, Tekes Valley, two ♂♂ (in juvenile molt), one ♀ ad., Aug. 31, 1925.

Two additional specimens, adult males, were secured on December 26, 1925 and January 2, 1926 at Alapalli, Chanda district, Central Provinces.

The Indian Stone Chat is widely diffused in Turkestan as well as in the Himalayas. Birds from Kashmir and the Tian Shan appear to be perfectly alike.

The few Kansu specimens of *S. t. przewalskii* (Pleske) examined in this connection are somewhat larger, more rufous on the belly,

<sup>1</sup>As pointed out long ago by Scully (*Ibis*, 1881, p. 443).

<sup>2</sup>Wiss. Res. Reisen Przewalski, 2, Birds, Part 1, p. 38, 1889.

and have the white patch on the sides of the neck rather smaller. The differences are, however, not very striking, and the distribution of this form during the breeding season is not quite clear. Pleske<sup>1</sup> extends its range west to the Russian and the Keriya ranges,<sup>2</sup> and refers to it also the Stone Chat found by Scully (p. 142) in August in bushes of willows and buckthorn fringing the Sanju stream at elevations of from 9,000 to 11,000 feet. Meinertzhagen (Ibis, 1927, p. 583) records several examples taken early in May at Leh, Ladak, but in spite of the late date, believes them to have been on passage. Oustalet (1893, p. 169) is no doubt mistaken in assigning a (young) male taken on August 28, 1889, at Jarkent to *S. t. przewalskii*. More detailed information about the breeding range of this form is urgently required.

***Ianthia cyanura pallidior* Baker.** Kashmir Red-flanked Bush Robin.

*Ianthia cyanura pallidiora* (sic) BAKER, Fauna Brit. India, 2nd ed., Birds, 2, p. 101, 1924—Simla.

KASHMIR: Baltal (alt. 9,500 ft.), ♂ ad., May 24, 1925.

Examination of the large series in the British Museum shows this to be rather a poor race and hardly worthy of recognition, a good many individuals being indistinguishable from *I. c. rufilata*, of the eastern Himalayas.

Its breeding range extends from the Afghan frontier east to Garhwal. Not found in Ladak.

***Chaimarrornis leucocephala* (Vigors).** White-capped Redstart.

*Phoenicurus leucocephala* VIGORS, Proc. Comm. Sci. Corresp. Zool. Soc. Lond., 1, "1830-31," p. 35, pub. March, 1831.—Himalayas; = Simla-Almora district (see Ticehurst and Whistler, Ibis, 1924, p. 471).

KASHMIR: Sonamarg (alt. 8,500 ft.), Sind River, ♂ ad., May 23; Baltal (alt. 9,500 ft.), ♂ ad., May 23, 1925.

The White-capped Redstart is widely distributed throughout the Himalayas from the Afghan border east to Tibet, China, and neighboring countries. While common in Kashmir, its occurrence in Ladak is restricted to the western section. Biddulph (in Sharpe, p. 86) says it is common in the Dras Valley from the Zogi La down to Kargil; Mrs. Wathen (Journ. Bomb. Nat. Hist. Soc., 29, p. 698, 1923), on her trip across Ladak, noticed it as far east as beyond Kar-

<sup>1</sup>Wiss. Res. Reisen Przewalski, 2, Birds, Part 1, pp. 46, 52, 1889.

<sup>2</sup>The measurements given for the specimens from Achan, Russian Range (p. 52), indeed appear to support his view.

gil; Osmaston (Ibis, 1925, p. 681) found it, though not common, on the upper waters of the Dras and Suru rivers; and Meinertzhagen (Ibis, 1927, p. 587) also observed a few between Dras and Kargil, and another farther east at Moulbekh.

I do not see any difference between Indian and Chinese specimens.

**Rhyacornis fuliginosa fuliginosa** (Vigors). Plumbeous Redstart.

*Phoenicura fuliginosa* VIGORS, Proc. Comm. Sci. Corresp. Zool. Soc. Lond., 1, "1830-31," p. 35, pub. March, 1831—Himalayas; = Simla-Almora district (see Ticehurst and Whistler, Ibis, 1924, p. 471).

KASHMIR: Above Tangan Gorge (alt. 8,000 ft.), ♀ ad., May 23, 1925.

This species breeds throughout the Himalayas from Chitral east, and is also widely diffused in China and neighboring countries. It is obviously absent from Ladak.

**Phoenicurus ochruros phoenicuroides** (Horsfield and Moore). Kashmir Redstart.

*Ruticilla phoenicuroides* HORSFIELD and MOORE, Cat. Birds Mus. East-India Comp., 1, p. 301, 1854<sup>1</sup>—Shikarpore, Afghanistan, colli. Griffith; type now in British Museum.

KASHMIR: Baltal (alt. 9,500 ft.), two ♀ ♀ ad., May 23, 24, 1925.

LADAK: Matayan (alt. 11,000 ft.), ♂ ad., May 25; Kargil (alt. 8,800 ft.), ♂ ad., May 26; Fotu La (alt. 13,800 ft.), ♂ ad., May 30; Nurle, Indus Valley (alt. 11,000 ft.), ♂ (first annual), May 31; Leh, two ♂ ♂ ad., ♀ ad. (nesting), June 3, 5; Panamik, Nubra, ♂ (first annual), ♀ ad. (breeding), June 11, 13, 1925.

CHINESE TURKESTAN: Ali Mazar, Kurghan (alt. 11,300 ft.), upper Karakash River, Hill Yarkand, ♂ ad., June 30, 1925; Kailik (alt. 7,500 ft.), South Musart River, Tian Shan, ♀ ad., Sept. 16, 1925.

Aside from a slight variation in the amount of black on the upper back, the adult males are very constant in their characters, and agree with the series from Kashmir and the Kaghan Valley in the British Museum. Birds from Lahul and Rupshu, collected by Babault (p. 174, s. n. *Ruticilla rufiventris*) and preserved in the French National collection, are also similar. The length of the wing, in males from the western Himalayas, ranges from 82 to 85 mm.

The single male from Hill Yarkand is identical in coloration, but by slightly longer wings (87 mm.) manifests a certain tendency in the

<sup>1</sup>Horsfield and Moore's account appears to have slight priority over Moore's description of *R. phoenicuroides*, in Proc. Zool. Soc. Lond., 22, p. 25, pl. 57, which was not published until January 10, 1855.

direction of *P. o. xerophilus* Stegmann,<sup>1</sup> of the Russian Range and western Nan Shan.

*P. o. phoenicuroides* inhabits the western Himalayas east to Spiti and Kulu,<sup>2</sup> and stretches west to Afghanistan and Baluchistan, north to Turkestan and the southern Altai. During the nesting season it does not occur in the Tarim basin, but breeds in the surrounding mountain ranges. Scully (p. 144, *R. rufiventris*) found it common in August on the Arpalak River and other mountain streams in Hill Yarkand at elevations of from 7,000 to 10,000 feet. The Second Yarkand Mission (Sharpe, p. 87) met with it at various localities in Sarikol as well as in the hill country around Kugiar, south of Karghalik, in May and June. It is well known to breed in the Tian Shan, whence it has been recorded by numerous authorities (see Laubmann, p. 97). Birds from Narynsk and the vicinity of the Issik-kul, which we have examined in the Munich Museum, appear to be inseparable from those of northwestern India.

*P. o. rufiventris* is now known to be restricted to Tibet and parts of China.

### **Phoenicurus frontalis** (Vigors). Blue-fronted Redstart.

*Phoenicura frontalis* VIGORS, Proc. Comm. Sci. Corresp. Zool. Soc. Lond., 1, "1830-31," p. 172, pub. March, 2, 1832—Himalayas; = Simla-Almora district (see Ticehurst and Whistler, Ibis, 1924, p. 471).

KASHMIR: Baltal (alt. 9,500 ft.), ♂ ad., ♀ ad., May 23, 1925.

While generally diffused throughout the Himalayas from Gilgit and Kaghan eastward, this Redstart is obviously absent from Ladak. The alleged Chinese form (*P. frontalis sinæ* Hartert) seems barely separable.

### **Phoenicurus erythrogaster grandis** (Gould). Gldenstdt's Eastern Redstart.

*Ruticilla grandis* GOULD, Proc. Zool. Soc. Lond., 17, "1849," p. 112, pub. 1850—"Afghanistan and Thibet."

CHINESE TURKESTAN, HILL YARKAND: Ali Mazar, Kurghan (alt. 11,300 ft.), upper Karakash, ♂ ad., June 30, 1925.

Identical with specimens from the Tian Shan (Narynsk).

This fine Redstart is widely distributed throughout the high mountain ranges of Turkestan and the Himalayas from Baltistan east to Sikkim and southern Tibet. It is fairly common in Ladak,

<sup>1</sup>Journ. Orn., 76, p. 501, 1928—Russian Range.

<sup>2</sup>Whistler, Journ. Bomb. Nat. Hist. Soc., 31, p. 465, 1926.



but does not seem to occur in Kashmir proper. In Hill Yarkand, Henderson (p. 210) and Scully (p. 144) met with it near Sanju Pass at an elevation of between 12,000 and 13,000 feet, where a young bird, about two months old, was collected. The Second Yarkand Mission, according to Sharpe (p. 88), secured specimens west of Yarkand. In the Tian Shan, this Redstart is likewise generally diffused. During the breeding season it lives by mountain streams at extreme elevations (between 12,000 and 16,000 feet), but descends to lower altitudes on the approach of severe weather. Menzbier (p. 356), for example, mentions that numbers of this Redstart were met with in the beginning of October along the Taushkan Darya, near Uchturfan, on the south slope of the Tian Shan. Whistler (Ibis, 1925, p. 173) and Osmaston (Ibis, 1925, p. 682) recently described its nesting habits from observations in Lahul and Ladak respectively.

In Kansu and other parts of northeastern Tibet, the present form is replaced by the larger *P. e. maximus* Kleinschmidt.

***Luscinia megarhynchos golzii* Cabanis.** Turkestan Nightingale.

*Luscinia golzii* CABANIS, Journ. Orn., 21, p. 79, 1873—Turkestan, coll. Fedtschenko.

CHINESE TURKESTAN, TIAN SHAN: Shatta, Tekes Valley, ♂ ad., Aug. 25, 1925.

Duller above, with less rufescent tail, and rather more buffy underneath than twelve skins of typical *megarhynchos* from various parts of Europe in the collection of Field Museum.

Severtzow (1875, p. 177) lists the Nightingale as breeding throughout the Tian Shan from the Karatau and Zerafshan east to the Issik-kul; Almásy, as reported by Smallbones (p. 412), found it common along the middle and lower Ili; and Pleske (1888, p. 32) records it from Chinaz and the Iskander-kul in the Chatkal-tau.

***Cyanosylvia svecica abbotti* (Richmond).** Ladak Blue-throat.

*Cyanecula abbotti* RICHMOND, Proc. U. S. Nat. Mus., 18, p. 484, 1896—Nubra Valley, Ladak (type examined).

LADAK: Panamik, Nubra, four ♂♂ ad., June 11, 12, 13, 1925.

Additional specimens.—U. S. National Museum: three ♂♂ ad., Nubra Valley, alt. 11,000 ft., June 16, 18, 1893 (including the type of *C. abbotti*); Pashgam, Indus Valley, 9,000 ft., ♂ ad., June 25, 1893; Leh, alt. 12,000 ft., ♂ ad., July 5, 1893. W. L. Abbott.—British Museum: Indus Valley, Ladak, alt. 10,000 ft., ♂ ad., June 29, 1874. J. Biddulph (labeled *C. wolffi*); Nubra Valley, four ♂♂ ad., June 25, 1874. J.

Biddulph;<sup>1</sup> Pashgam, Ladak, alt. 9,300 ft., two ♂♂ ad., May 5, 1923. B. B. Osmaston; Wakka Nala, Ladak, alt. 10,000 ft., two ♂♂ ad., May 7, 1923. B. B. Osmaston; Shushot, Indus River, alt. 10,600 ft., ♂ ad., ♀ ad., May 31, 1923. B. B. Osmaston; Spituk (below Leh), alt. 10,500 ft., two ♂♂ ad., two ♀♀ ad., May 26, 29, 1923. B. B. Osmaston.

Sixteen more specimens from Kargil, Leh, Chimre, and Nubra I have examined in Col. Meinertzhagen's collection.

When separating *C. abbotti*, Dr. Richmond based his description on three white-starred males, referring a red-starred individual taken at the same time in Nubra as well as others from the Indus Valley to *C. svecica*. Baker,<sup>2</sup> on the basis of Ludlow's observations,<sup>3</sup> admitted two species breeding in the Indus Valley, calling the red-spotted form *C. s. pallidogularis*, the white-spotted one *C. c. abbotti*. Osmaston (*Ibis*, 1925, p. 683), while listing the two varieties under separate names, expressed the belief that the difference in the color of the star might be an example of dimorphism, and in a later communication (*Journ. Bomb. Nat. Hist. Soc.*, 31, p. 983, 1927) actually united all the Blue-throats of Ladak under *C. cyanecula abbotti*. Finally, Col. Meinertzhagen (*Ibis*, 1927, pp. 589-590) discussed the case at length, and came to the conclusion that there was but one variable form in Ladak, as had already been intimated by Hartert.<sup>4</sup>

My own studies lead to exactly the same results. All breeding birds from Ladak, regardless of the color of the star, agree *inter se* in relatively long bill, dark brownish upper parts, deep blue throat (varying from cadet blue to flax-flower blue), and smallness of the star. The latter is either uniform tawny (ochraceous tawny); or tawny (ochraceous tawny), with the extreme basis of the feathers white; or white, tipped with ochraceous tawny; or plain white. Among twenty-two adult males, eleven are white-starred, six rufous-starred, and five intermediate,<sup>5</sup> those with the white star having the blue of the throat generally of a darker tone. The bluish suffusion of the lores, well pronounced in the majority, is evidently independent of the coloration of throat or star. Birds from the Indus Valley perhaps average slightly paler on the throat than those from Nubra.

<sup>1</sup>Three white-starred individuals labeled *C. wolffi*, one red-starred named *C. svecica*.

<sup>2</sup>*Fauna Brit. India*, 2nd ed., *Birds*, 2, pp. 85, 86, 1924.

<sup>3</sup>*Journ. Bomb. Nat. Hist. Soc.*, 27, p. 143, 1920.

<sup>4</sup>*Vög. Pal. Fauna*, 1, p. 750, 1910.

<sup>5</sup>The same variation may be observed in the South Russian *C. s. occidentalis*, which Field Museum has from the lower Volga (Sarpa steppe).

The breeding area of *C. s. abbotti* is apparently restricted to Ladak, ranging from Kargil in the west through the Indus and Shyok valleys east to the Nubra River (7,000 to 12,000 feet). In the north, it does not cross the main Karakoram Range,<sup>1</sup> and in Hill Yarkand it is replaced by the pale-throated, large-starred *C. s. pallidogularis*, as shown by two breeding males obtained by Scully and Stoliczka in the British Museum. It is extremely doubtful whether it really extends to the Pamir and Alai, as claimed by Hartert,<sup>2</sup> as no blue-throat appears to breed in either Kashmir proper or Gilgit, and I am also inclined to question its occurrence anywhere else in Turkestan, although Sarudny<sup>3</sup> apparently includes *C. s. abbotti* among the blue-throats found in that province. Unfortunately, his review is a sealed book to me owing to its being written in the Russian language.

*C. s. abbotti* winters in the plains of India.

**Cyanosylvia svecica pallidogularis** (Sarudny). Sarudny's Blue-throat.

*Cyanecula svecica* var. *pallidogularis* SARUDNY, Mater. Kennt. Fauna and Flora Russ. Reiches, 3, p. 186, 1897—Orenburg, Transcaspia, and Turkestan (see Ornith. Monatsber., 6, p. 83, 1898).

CHINESE TURKESTAN: Oku Mazar, near Maralbashi, ♂ (first winter), Sept. 25; Ox-su River, Tekes Valley, Tian Shan, ♀ (first winter), Aug. 30, 1925.

In comparison to *C. s. abbotti*, this race is brighter and paler, more buffy brown above, has a shorter bill, wider buffy whitish superciliaries, and a much paler (forget-me-not) blue throat, while the light tawny star is much more extensive, forming a broad semi-lunar marking. Among thirty adult males from Turkestan (Tian Shan, Tashkent, etc.) in the Munich Museum, there are only two from Narynsk (April 22, and May 12, 1910) with the star partly rufous and partly white. In all the others it is quite uniform tawny. In contradiction to Hartert,<sup>4</sup> who includes Eastern Turkestan in the range of *C. s. abbotti*, the blue-throat breeding in the Tarim basin proves to belong to the Tian Shan race, which I believe to be entitled to the name *C. s. pallidogularis*, although I have not been able to

<sup>1</sup>The blue-throats mentioned by Henderson and Hume (p. 214) s. n. *C. svecica* from the upper Karakash were taken during the fall migration. The British Museum has a female from Shahidulla, Sept. 20, 1870, and a young female from Kush Maidan, Sept. 26, 1870. Both are in very poor condition, but as far as I can see, they belong to the Turkestan form, *C. s. pallidogularis*.

<sup>2</sup>Vög. Pal. Fauna, 1, p. 750, 1910.

<sup>3</sup>Mess. Orn., 3, pp. 308-316, 1912.

<sup>4</sup>Vög. Pal. Fauna, 1, p. 750, 1910.

compare specimens from Orenburg, which seem to have served as principal basis for Sarudny's description. An adult male, secured by J. Scully at Yarkand on May 3, 1875, and preserved in the British Museum, is indistinguishable from Tian Shan birds, and another male shot by F. Stoliczka in Hill Yarkand, north of Kugiar (south of Karghalik) on June 1, 1874, belongs to the same race.

According to Scully (p. 145), the blue-throat is a seasonal visitor to the plains of Eastern Turkestan, arriving about the end of March and leaving in September. It breeds in the neighborhood of Yarkand, laying in May. Stoliczka, as recorded by Sharpe (p. 89, *C. caerulecula*), found it nesting near Karghalik on May 29, and shot a specimen further south on the road to Kugiar on June 1, 1874.<sup>1</sup> Przewalski, we are told by Pleske,<sup>2</sup> noted it as an abundant breeding species in the oases of Niya and Keriya at the northern foot of the Kuenlun, while Abbott, according to Richmond (p. 585), obtained an immature male on August 4, 1894 at Kilian, alt. 6,000 feet. It also breeds in the Tian Shan, where Przewalski met with it in the valleys of the Ili, Yulduz, and Chaidyk-gol. Almásy (see Smallbones, p. 412) found it in the Balkash lowlands as well as on the plateaux of the Sary-djass, while Laubmann (p. 100) lists breeding specimens from Narynsk.

On migration, it passes through northern India. Two adult males, obtained by W. L. Abbott in Baltistan at Skardu (March 18, 1892) and Gol (March 21, 1892)<sup>3</sup> which, thanks to the courtesy of Dr. Richmond, I have been enabled to examine, are typical of *C. s. pallidogularis*, and agree in every respect with Tian Shan birds.

The exact limits of its breeding range are difficult to indicate. It will be remembered that Sarudny<sup>4</sup> described a white-starred form from Turkestan (Tashkent; Ferghana) as *C. leucocyana turkestanica*, but its relationship to *C. s. pallidogularis* requires thorough investigation. The two races recently described by Sushkin<sup>5</sup> from western Siberia and the Altai are evidently different, judging from specimens in the Munich Museum.

<sup>1</sup>There can be little doubt that the "quite young bird" obtained by Henderson at Sanju, alt. about 6,000 ft., and listed as *C. suecica* (p. 214) should likewise be referred to *C. s. pallidogularis*.

<sup>2</sup>Wiss. Res. Reisen Przewalski, 2, Birds, Part 1, p. 70, 1889.

<sup>3</sup>*C. suecica* RICHMOND, p. 483.

<sup>4</sup>Ornith. Monatsber., 18, p. 122, 1910.

<sup>5</sup>List and Distribution of Birds of the Russian Altai, etc., pp. 77, 78, 1925.

**Leptopoecile sophiae sophiae** Severtzow. Tit-Warbler.

*Leptopoecile sophiae* SEVERTZOW, Izv. Obsheh. Moskov., 8, No. 2, p. 135, pl. 8, figs. 8, 9, 1873—"spruce" forests on the Issik-kul, Tian Shan.

CHINESE TURKESTAN, TIAN SHAN: Han Aulik, North Musart River, ♂ ad., Aug. 18, 1925.

LADAK: Panamik, Nubra, ♂ juv., June 11, 1925.

The Han Aulik bird agrees with a series from the Issik-kul in the Munich Museum. Others from the Alai and Ferghana ranges are also similar.

The status and ranges of the two western races of this species seem to require further investigation. Hartert<sup>1</sup> separates *L. s. deserticola*, distinguished by paler coloration, particularly more sandy, less grayish back, and gives as its distribution the mountain chain along the southern border of the Tarim basin and Gobi desert, from the Russian Range east to the Altyn-tagh and Zaidam (Naichigol). Nevertheless, he relegates *Stoliczкана stoliczkae* Hume,<sup>2</sup> described from the vicinity of Sanju Pass, in the Kilian Range south of the Tarim basin, to the synonymy of *L. s. sophiae* (whose distributional area is given as extending from the Tian Shan to Gilgit), and claims that Hume's type belongs to the dark colored typical race. Bianchi,<sup>3</sup> however, refers birds from Tochtachon (northern slope of Raskam Range),—which is even farther west than the Sanju River,—to the pale form inhabiting the Altyn-tagh and Nan Shan, and calls it *L. s. stoliczkae*. This disposition of the case would seem to be more logical than Hartert's arrangement, which splits the Tit-Warblers of the Kuenlun into two races. Not having any material from the disputed region, we must leave it to others to decide the problem; but we would like to mention that a single adult male from the Braldu Valley, Baltistan, Jan. 2, 1892, W. L. Abbott (U. S. National Museum, No. 126755) hardly differs from Tian Shan birds by being a slight shade paler on the back. Meinertzhagen (Ibis, 1927, p. 415), too, notices that two males from Leh, Ladak, agree with others from the Tian Shan. Thus, typical *L. s. sophiae* would seem to stretch across Gilgit and Baltistan as far east as Ladak.

<sup>1</sup>Vög. Pal. Fauna, 1, p. 401, 1907—no locality specified, but from a later communication (Nov. Zool., 27, p. 441, 1920) we learn that the type was obtained by M. W. Pewtzow in November, 1889 at Karasai, on the north-slope of the Russian Range, Kuenlun.

<sup>2</sup>Stray Feathers, 2, p. 513, 1874—"obtained at very high elevation in Thibet by Forsyth's second Yarkand expedition"; the type came from Kichik Yailak, at the head of the Sanju River, southern Chinese Turkestan (see Sharpe, Scient. Res. Second Yarkand Mission, Aves, p. 67, No. 858, ♂ "Gidjik," Oct. 24, 1873).

<sup>3</sup>Bull. Acad. Sci. St. Pétersb., (5), 22, pp. 43-44, 1905.

Four adult males from the Kukunor Mountains in western Kansu, courteously lent by the Museum of Comparative Zoology, Cambridge, on the other hand, are decidedly darker throughout, with the light abdominal area more restricted and of a deeper buff. They do not agree with Hartert's description of *L. s. deserticola* and, while certainly different from *L. s. obscura* as represented by a series from southwestern Kansu (near Choni), they may be referable to *L. s. major* Menzbier (Ibis, 1885, p. 353), based on specimens from the Taushkan Darya around Uchturfan, near the southern foot of the Tian Shan.

Typical *L. s. sophiae* is known to breed in the central and western ranges of the Tian Shan (Naryn Valley, Issik-kul, North Musart River), north to the Boro-khoro Range (Jarkent), and to stretch west into Ferghana (Ferghana Range and Alai)<sup>1</sup> and Samarkand (Hissar Range, Zerafshan).<sup>2</sup> In Gilgit, Biddulph (Ibis, 1882, p. 280) found it in June in a secluded valley, close to the Indus, where the birds were doubtless nesting. It is rather rare in Ladak. Biddulph (Ibis, 1881, p. 71) shot a single young bird at Leh, where Meinertzhagen (Ibis, 1927, p. 415) also recently met with the species. Ward (1906, p. 111) calls it "fairly common on the Shyok, Ladak, and on the Indus," and received it in summer from the Nubra Valley (1908, p. 461), where it obviously breeds, as is shown by our own specimen, a full grown young bird from Panamik.

In the breeding season, this bird lives in the juniper forests at elevations between 9,000 and 12,000 feet, but descends to lower altitudes in severe weather. According to Przewalski's and Carruthers' observations, it is an early breeder, building its nest late in April or very early in May.

***Prunella fulvescens juldussica* Sushkin. Yulduz Hedge Sparrow.**

*Prunella fulvescens juldussica* SUSHKIN, Proc. Boston Soc. Nat. Hist., 38, p. 50, 1928—Defile of Naryn, Tian Shan (in winter).

CHINESE TURKESTAN: Kailik (alt. 8,600 ft.), South Musart River, south slope of Tian Shan, ♂ ad., Sept. 16, 1925.

Compared with three winter specimens from the Issik-kul, this bird is somewhat darker and more grayish (less brownish) on the upper parts and deeper ochraceous underneath. Still, I am a little doubtful as to the constancy of these divergencies, since another adult from south of the Issik-kul (April) and an adult male from

<sup>1</sup>See Stolzmann, 1897, p. 69.

<sup>2</sup>Carruthers, Ibis, 1910, p. 453.

Gilgit (Dec. 1, 1879, J. Scully) are even paler, both above and below, than the Issik-kul skins mentioned above.

According to Sushkin, typical *P. f. fulvescens*, during the nesting season, inhabits the whole of Russian Turkestan as far northeast as the ranges around Issik-kul, whereas *P. f. juldussica* replaces it east beyond the Russian frontier, extending, however, into the Sarydjass Range and straggling in winter as far west as Przewalsk and Narynsk, i. e. into the breeding area of *P. f. fulvescens*.

I must confess I have not much confidence in the distinctness of these two alleged races, and would not be surprised if they ultimately turned out to have been based on individual or seasonal rather than geographical variation. At any rate, it is very unfortunate that the describer should have selected as type of *P. f. juldussica* a winter specimen taken far away from the supposed breeding range.

*P. f. dresseri* Hartert, from the mountain ranges along the southern border of the Tarim basin, on the other hand, appears to be a well-marked race, distinguishable by its exceedingly pale coloration.

### ***Prunella atrogularis* (Brandt). Black-throated Hedge Sparrow.**

*Accentor atrogularis* BRANDT, Bull. Cl. Physico-Mathém. Ac. Sci. St. Pétersb., 2, p. 140, 1844—Semipalatinsk.

CHINESE TURKESTAN, TIAN SHAN: Han Aulik, North Musart River, ♂ juv., Aug. 19, 1925.

Field Museum has specimens, including breeding birds taken in July, from Narynsk, Tian Shan.

The Black-throated Hedge Sparrow is widely distributed in the mountainous regions of Central Asia. In the Tian Shan, it is a characteristic species of the alpine zone. Severtzow (1875, p. 177) lists it for the central section; Almásy, as recorded by Smallbones (p. 412), found it common in the mountain chains south and east of the Issik-kul, where Merzbacher (Schalow, 1908, p. 241) also met with it; and Pleske<sup>1</sup> tells us that Przewalski obtained specimens in June in the coniferous forests along the Zanma [= Tsangma] River. Besides, it occurs in the Alai and Ferghana Range, and extends north to the Altai and into Dsungaria, and is also found in the western Himalayas.

<sup>1</sup>Wiss. Res. Reisen Przewalski, 2, Birds, Part 3, p. 146, 1894.

**Troglodytes troglodytes tianschanicus** Sharpe. Tian Shan Wren.

*Troglodytes pallidus* (not of LAFRESNAYE and D'ORBIGNY, 1837) HUME, *Stray Feathers*, 3, p. 219, 1875—Kashgar (in winter).

*Troglodytes tianschanica* (Severtzow MS.) SHARPE, *Cat. B. Brit. Mus.*, 6, p. 273, 1881—Turkestan.

CHINESE TURKESTAN, TIAN SHAN: Shatta, Tekes River, ♂ ad. (molting), two ♂♂ and one unsexed (juvenile plumage), Aug. 26, 27; Agijas, Tekes Valley, ♀ juv., Sept. 4; Mointa, Tekes Valley, ♀ juv., Sept. 7, 1925.

This pale race of the European House-Wren breeds in the Tian Shan. Severtzow (1875, p. 179<sup>1</sup>) indicates that it is found throughout this mountain system from the Kara-tau in the extreme west to the Issik-kul, north to Kopal. Lönnberg (1905, p. 19) records it from Baimgol, a tributary of the Tekes; Smallbones (p. 414) from Kapkak and Karakul-Przewalsk; Gyldenstolpe (p. 22) and Laubmann (p. 103) from Narynsk. According to Pleske,<sup>2</sup> it was observed (or collected) by Przewalski near the Sairam-Nor, on the Balgantai-gol, and along the Kunges and Zanma [=Tsang-ma] rivers, and the same ornithologist<sup>3</sup> tells us that the brothers Grum-Grzimalo met with this wren near Hami in the extreme east of the range. Stolzmann (1897, p. 75) reports on specimens taken by T. Barey in Ferghana, and Carruthers (*Ibis*, 1910, p. 464) states it is common in the rocky mountain-gorges near Samarkand. Northwards, its range extends to the Tarbagatai and Zaissan Nor.<sup>4</sup>

In the Tarim basin, *T. t. tianschanicus* is merely a winter visitor. Scully (p. 139) found it tolerably common near Yarkand; the Second Yarkand Mission (Sharpe, p. 97) secured specimens between November and February at Sanju, Bora, Yarkand, Yangihissar, and Kashgar; and Oustalet (1893, p. 203) mentions a single example taken by Prince Orléans's party in October at Chunkal, south of Kurla, near the Tarim River.

**Cinclus cinclus leucogaster** Bonaparte. White-bellied Dipper.

*Cinclus leucogaster* (Eversmann MS.) BONAPARTE, *Consp. Av.*, 1, p. 252, 1850—"western Siberia."

CHINESE TURKESTAN, TIAN SHAN: Agijas, Tekes Valley, ♀ ad., ♀ juv., Sept. 3, 4, 1925.

<sup>1</sup>*Troglodytes parvulus* β. *tianschanicus* is a nomen nudum here.

<sup>2</sup>Wiss. Res. Reisen Przewalski, 2, *Birds*, Part 3, p. 180, 1894.

<sup>3</sup>Bull. Acad. Sci. St. Pétersb., (nouv. sér.), 3, p. 132, 1892.

<sup>4</sup>Sushkin, *List and Distribution of Birds of the Russian Altai, etc.*, p. 54, 1925.



The adult is of the common type with dark gray dusky-edged rump, which predominates in the central Tian Shan. A series from Narynsk in the Munich Museum is similar. Birds from the Karatau, Ala-tau, and Chatkal-tau have been separated by Sarudny<sup>1</sup> as *C. l. triznae* on account of (nearly plain) brownish rump, but their distinctness has been questioned by Hartert and others. While admitting a certain amount of individual variation, I am not quite convinced that they are really the same, and an average difference may exist after all between western and eastern birds. This question, however, can only be decided by the examination of good series of breeding birds.

This dipper, widely diffused in Siberia and Central Asia, seems to extend south along the western border of the Tarim basin. Sharpe (p. 96) records a worn, apparently breeding specimen taken by the Second Yarkand Mission on May 12, 1874 at Tarbashi, Sarikol, while W. L. Abbott, according to Richmond (p. 586), shot an adult male on June 4, 1894 in the Tagdumbash Pamir. Pleske<sup>2</sup> even refers birds obtained by Przewalski in the foothills of the Russian Range (near Achan) and Keriya Range (near Khotan) to the present form. It was once taken in Gilgit.

### **Hirundo rustica rustica** Linnaeus. Barn Swallow.

*Hirundo rustica* LINNAEUS, Syst. Nat., 10th ed., 1, p. 191, 1758—Sweden.

CHINESE TURKESTAN: Echitgo (Carshamba Bazar), two ♂♂ juv., July 17; Lailik-ötang, ♂ juv., July 18; Maralbashi, Kashgar River, two ♂♂ juv., July 28; Tumshok (near Maralbashi), two ♀♀ ad., Sept. 24, 1925.

One of the adult birds is a typical *rustica* with complete bluish black jugular band, and indistinguishable from European specimens (wing 117 mm.). The other example, in which the jugular band is broken by rufous in the middle, closely resembles *H. r. gutturalis* on this score; it is, however, decidedly larger (wing 121 mm.) and more tinged with rufescent below, particularly on the under tail coverts. The young birds agree precisely with others from Germany.

The Barn Swallow breeds in great numbers in the plains of the Tarim basin. Both Henderson (p. 176) and Scully (p. 131) met with it all the way from Sanju to Kashgar, and Stoliczka, as recorded by Sharpe (p. 107), found it common around Sarikol and Yarkand. The swallows arrive about the middle of April, breed during May and June, and migrate south late in September or early in October. The European form nests also in Kashmir.

<sup>1</sup>Ornith. Monatsber., 17, p. 180, 1909.

<sup>2</sup>Wiss. Res. Reisen Przewalski, 2, Birds, Part 1, p. 33, 1889.

**Upupa epops epops** Linnaeus. Hoopoe.

*Upupa epops* LINNAEUS, Syst. Nat., 10th ed., 1, p. 117, 1758—"habitat in Europae sylvis," restricted type locality Sweden.

CHINESE TURKESTAN: Echitgo, Yarkand River, ♀ ad. (breeding), July 16; Abad (Charshamba Bazar), ♂ imm. July 19; Shamal, ♀ imm., July 22, 1925.

Besides, I have examined a series of ten, including breeding and young birds, from Narynsk, Tian Shan, in the Munich Museum. Turkestan specimens appear to me inseparable from those of Europe, the alleged characters of *U. e. loudoni* being entirely within the range of individual variation, although the percentage of pale-colored examples is perhaps rather greater in the east. In no case, however, do the Hoopoes of the Tarim basin and Tian Shan belong to *U. e. saturata*, if this supposedly darker race of eastern Siberia and Mongolia can be maintained.

The Hoopoe is a common bird in Kashgaria, where it is said to be a permanent resident. Scully (p. 136) met with it in the fields about Kashgar and Yarkand; at the little oases in the desert, between Karghalik and Sanju; in the valley of the Karakash, and even in the barren region near the Karakoram Pass at an elevation of over 18,000 feet. The Second Yarkand Mission, as reported by Sharpe (p. 110), found it breeding near Yarkand, where specimens were obtained as late as in November, while Parrot (p. 263) mentions one secured by Zugmayer on May 21 at Khotan; Richmond (p. 587) records a single adult from Sarikol taken by Abbott in April at an elevation of 10,400 feet, and Severtzow (*Ibis*, 1883, p. 71) noticed the Hoopoe in August throughout the Pamir, where it probably breeds. Menzbier (*Ibis*, 1885, p. 357) lists it from near Jangishar (November 22), and Schalow (1901, p. 430) from Kashgar (February 25). For the Tian Shan, the Hoopoe is given by Severtzow (1875, p. 179) as generally distributed; but Almásy (see Smallbones, p. 421) states that it was rare in the section explored by him.

According to Meinertzhagen (*Ibis*, 1927, p. 603), breeding birds from Baltistan and Ladak (Leh) are referable to *U. e. epops*. The few specimens I have seen from the Vale of Kashmir appear to be intermediate to *U. e. orientalis* Baker.<sup>1</sup>

**Coracias garrula semenowi** Loudon and Tschusi. Eastern Roller.

*Coracias garrulus semenowi* LOUDON and TSCHUSI, Ornith. Jahrb., 13, p. 148, 1902—Kaachka, Transcaspia.

<sup>1</sup>Bull. Brit. Orn. Cl., 42, p. 29, 1921—new name for *U. indica* REICHENBACH (not of LATHAM).

KASHMIR: Gund (alt. 7,000 ft.), ♂ ad., May 12, 1925.—Wing 205.

Kashmir birds are on average slightly larger than others from Transcaspia, Turkestan, and Mesopotamia, but agree in coloration.

The Roller is reported to breed in great numbers in the valleys of Kashmir and Peshawar. In Ladak it appears to occur only on migration, and it is also extremely doubtful whether it nests in the plains of Eastern Turkestan. Henderson (p. 177) obtained a single (young) bird in Yarkand, and Scully (p. 133) records two from near Sanju and the Karakash valley, both of which he believed to be on their southward migration.

North of the Tarim basin in the Tian Shan, however, the Roller is well established as a breeding species. Severtzow (1875, p. 180) lists it as occurring sparingly throughout the whole range; while Lönnberg (1905, p. 17) mentions a female secured on May 13, 1902 in the valley of the Baimgol, a tributary of the Tekes River, and Laubmann (p. 34) an adult male taken by Merzbacher's party above Narynsk late in August. 1910.

**Dryobates himalayensis albescens** Baker. Kashmir Pied Woodpecker.

*Dryobates himalayensis albescens* BAKER, Bull. Brit. Orn. Cl., 46, p. 70, 1926, "Goonā" [= Gund], Kashmir.

KASHMIR: Baltal (alt. 9,700 ft.), ♀ ad., May 24, 1925.

Examination of the large series in the British Museum shows the Pied Woodpecker of the extreme western Himalayas (Kashmir, Gilgit, and Afghan frontier) to be paler, less washed with fulvous underneath than typical *D. h. himalayensis* from Simla<sup>1</sup> and eastward.

*D. h. albescens* is common in Kashmir as far east as the Zogi La, but does not cross over the Himalayan Range into Ladak. Sharpe (p. 110) lists it for Murree, Dungagally, Changligally, Urumbu, and Sonamarg; Richmond (p. 495) from Lolab, Vale of Kashmir, Nowboog Valley, and the Pir Panjal Range, Kashmir, as well as from Haramosh, Baltistan; Bates (Journ. Bomb. Nat. Hist. Soc., 29, p. 801, 1923) from Kashmir generally. Biddulph and Scully (Ibis, 1881, pp. 48, 429) state that it is tolerably common in the pine forests of Gilgit, from 7,000 to 10,000 ft. elevation. In the west it ranges to Chitral and northeastern Afghanistan (Safed Koh; Hariab district).

<sup>1</sup>Birds from Kulu (see Whistler, Journ. Bomb. Nat. Hist. Soc., 31, p. 475, 1926) are probably referable to the typical race. No material is available.

**Picoides tridactylus tianschanicus** Buturlin. Tian Shan Three-toed Woodpecker.

*Picoides tridactylus tianschanicus* BUTURLIN, Ornith. Monatsber., 15, pp. 9, 10, 1907—Tian Shan.

CHINESE TURKESTAN, TIAN SHAN: Eidinka, North Musart River, ♂ ad., ♀ ad., Aug. 21, 1925.

This form differs from *P. t. alpinus*, of the Bavarian Alps, by the greater extent of white along the middle line of the back, white-tipped shorter upper tail coverts, and broader black malar stripe.

*P. t. tianschanicus* is peculiar to the Tian Shan, where it is rather widely distributed throughout the coniferous forests. Severtzow (1875, p. 180) lists it for the northeastern region (Semiretchje, Issik-kul, upper Naryn, Ak-sai, Kopal); Przewalski secured it on the Kunges and Tsang-ma rivers; Almásy, according to Smallbones (p. 421), collected a good series at Ilysky, Narynsk, Kapkak, Narynkol, and other localities in the central section; and Merzbacher (see Schalow, 1908, p. 110; Laubmann, p. 33) met with it in the vicinity of the Issik-kul, near Narynsk, as well as in the Musart Valley. The most easterly locality on record appears to be the Bogdo-ola Range, east of Urumchi (Pleske, 1892, p. 134).

**Jynx torquilla torquilla** Linnaeus. Wryneck.

*Jynx torquilla* LINNAEUS, Syst. Nat., 10th ed., 1, p. 112, 1758—"Europe," restricted type locality Sweden.

CHINESE TURKESTAN, TIAN SHAN: Shatta, Tekes Valley, ♂ ad., ♀ ad., Aug. 28, 1925.—Wing (male) 90, (female) 86 mm.

These and other specimens from the Tian Shan in the Munich Museum appear to me inseparable from a European series, though it is possible that the markings on the abdomen are on average not quite so decidedly arrow-shaped. The tone of the under parts is just as variable as in typical *torquilla*.

Poljakow described *J. t. harterti* from the Altai, basing the distinction on its smaller size (wing 82.3-84.3 mm.), but this form is obviously not recognized by Sushkin,<sup>1</sup> who indicates *J. t. torquilla* for that region.

The Wryneck has been variously recorded from the Tian Shan. Severtzow (1875, p. 180) mentions it for all his four districts as a breeding bird. Specimens are also listed by Lönnberg (1905, p. 18) from Baimgol; by Schalow (1908, p. 110) from the Issik-kul; and by Laubmann (p. 33) from Narynsk.

<sup>1</sup>List and Distribution of Birds of the Russian Altai, etc., p. 32, 1925.

**Cuculus canorus telephonus** Heine. Asiatic Cuckoo.

*Cuculus telephonus* HEINE, Journ. Orn., 11, p. 352, 1863—Japan.

CHINESE TURKESTAN: Maralbashi, Kashgar River, two ♂♂ ad., one ♀ juv., July 26, 29, 1925.—Wing (males) 220, 225 mm.

Compared with a series from Germany, Roumania, and Mesopotamia (*C. c. canorus*) in Field Museum, the adult males are decidedly paler gray on throat and chest, and the dusky cross bands underneath are much fewer and narrower, becoming evanescent on the lower tail coverts. Specimens from the South Musart River and Narynsk, Tian Shan, in the Munich Museum are similar. Even the young bird is much less barred below than European specimens in corresponding plumage. The series from Turkestan appears to be inseparable from the few Japanese Cuckoos we have been able to compare.

The late N. Sarudny<sup>1</sup> has separated another race, *C. c. subtelphonus*, from "Turkestan," on account of smaller size; but it is not clear from his article whether this supposed form occupies a different breeding range from *C. c. telephonus*, which he also records from Turkestan. At any rate, his measurements are much smaller than those of the Tian Shan and Maralbashi birds, whose wings vary from 218 to 230 mm.

According to Scully (p. 134), the Cuckoo is a summer visitor to the plains of Eastern Turkestan, arriving about the middle of April and leaving again early in August. The Second Yarkand Mission (Sharpe, p. 111) met with it around Yarkand in May, and Parrot (p. 265) records a couple of specimens taken by Zugmayer on May 28 at Khotan, while Merzbacher, as reported by Laubmann (p. 31), secured three birds in the Musart Valley at the southern foot of the Tian Shan.

**Surnia ulula tianschanica** Smallbones. Tian Shan Hawk Owl.

*Surnia ulula tianschanica* SMALLBONES, Ornith. Monatsber., 14, p. 27, 1906—Tian Shan.

CHINESE TURKESTAN, TIAN SHAN: Mointa, Tekes Valley, ♂ ad., Sept. 7, 1925.—Wing 242 mm.

Eight additional specimens from Narynsk and Issik-kul have been examined in the collections at Tring and Munich.

Though not always distinguishable in coloration, this form is decidedly larger than *S. u. ulula* (series from Sweden, Lapland, and

<sup>1</sup>Mess. Ornith., 5, pp. 108, 115, 1914.

Russia compared), and the ground color of the upper parts, as a rule, is of a deeper, more blackish hue.

*S. u. tianschanica* is peculiar to the forest region of the Tian Shan.<sup>1</sup> Severtzow (1875, p. 171) found it resident in the central section (upper Naryn and Ak-sai, north to Kopal); Rothschild (p. 162) and Smallbones (p. 421) record it from the Issik-kul; Laubmann (p. 30) from the vicinity of Narynsk. The specimen obtained by our own expedition serves to extend its range into Chinese Turkestan.

**Falco subbuteo centralasiae** (Buturlin). Central Asian Hobby.

*Falco subbuteo cyanescens* (not of VIEILLOT, 1823) LÖNNBERG, Ark. Zool., 2, No. 9, p. 6, 1905—Baimgol, Tian Shan.

*Hypotriorchis subbuteo centralasiae* BUTURLIN, Mess. Orn., 2, p. 175, 1911—new name for *Falco subbuteo cyanescens* LÖNNBERG, preoccupied.

CHINESE TURKESTAN: Conishar (six miles n. e. of Ak-su), ♂ ad., Aug. 7; Ox-su, Ox-su River, Tekes Valley, Tian Shan, two ♂♂ ad., Aug. 29, 30; near mouth of Mointa River, Tekes Valley, Tian Shan, one ♂, four ♀ imm., Sept. 8, 9, 1925.

This form having been based on two adult males from Baimgol, a tributary of the Tekes, the Tian Shan specimens in this collection are practically topotypes.

The various races of the Hobby are not strongly differentiated and, in the absence of sufficient series of breeding birds, their ranges cannot be outlined with any degree of accuracy. Compared with a good number of European specimens, the three adults are slightly paler above, particularly on the crown, with more white on the forehead, and have the nuchal patch more whitish, less tinged with buff or ferruginous. The last-named character also holds good in immature birds which, in addition, are not so intensely colored underneath as the corresponding stage of the European Hobby. Size is obviously not a reliable criterion for the Tian Shan race. Our three adult males have wings of 245, 250, and 263; ten from Europe measure from 252 to 262 mm.

The Hobby has been recorded from various parts of the Tian Shan by Severtzow (1875, p. 171), Pleske, Smallbones (p. 423), Schalow (1908, p. 105), and Laubmann (p. 26). According to Scully (p. 119), it breeds, though not in considerable numbers, in the plains of Eastern Turkestan between Yarkand and Sanju. Henderson

<sup>1</sup>The bird from Kossogol, near Kiachta, Transbaicalia (Lönnberg, Ark. Zool., 5, No. 9, p. 28, 1909), quoted by Laubmann (p. 30) in the synonymy of the Tian Shan race, certainly does not belong to *S. u. tianschanica*.

(p. 174) states that it is not uncommon about Yangi Bazar, eight miles from Yarkand, and Sharpe (p. 10) records an adult bird from the same region in his report on the Second Yarkand Mission.

Hobbies from Kashmir, Baltistan, and Ladak, which we have not seen, appear to be unusually large, judging from the figures given by Meinertzhagen (*Ibis*, 1927, p. 608). He refers them to the East Siberian *F. s. jakutensis*, but this can hardly be correct.

### **Cerchneis tinnunculus tinnunculus** (Linnaeus). Kestrel.

*Falco tinnunculus* LINNAEUS, *Syst. Nat.*, 10th ed., 1, p. 90, 1758—Europe, restricted type locality Sweden.

LADAK: Bod Kharbu (alt. 10,800 ft.), ♂ imm., May 29; Leh, ♂ ad., June 3, 1925.

CHINESE TURKESTAN, TIAN SHAN: near mouth of Mointa River, Tekes Valley, ♂ ad., ♀ ad., Sept. 2, 10; Shatta, Tekes Valley, two ♀ ♀ ad., Aug. 23; Agijas, Tekes Valley, ♂ imm., Sept. 4, 1925.

Individual variation in the Kestrel is unusually great, hardly two specimens from any one locality being exactly alike.

Birds from the western Himalayas and Tian Shan, of which I have seen an additional series in British collections, appear to be inseparable from the European Kestrel. Oberholser (p. 210) considered Ladak and Kashmir specimens to be distinguishable by their darker upper parts, but referred those from the Tian Shan to the European form, while Lönnberg (1905, p. 5), when comparing four adults from these mountains, noticed certain differences from Swedish examples.

In opposition to Oberholser, I find that the adult male shot on the Mointa River is much the darkest, whereas the Ladak bird is among the palest in the considerable series available for comparison. Both, however, can be matched by various specimens taken in the vicinity of Augsburg, Germany. I am, therefore, led to agree with Rothschild (*Nov. Zool.*, 33, pp. 231-232, 1926) and Meinertzhagen (*Ibis*, 1927, p. 609) that the kestrels of the western Himalayas and Central Asia are typical *tinnunculus*. At all events, *Falco interstinctus* Mc Clelland<sup>1</sup> is inapplicable, since the type—a winter-taken immature bird—was found by Rothschild (o. c., p. 232) to be referable to *C. t. japonicus*.

<sup>1</sup>Proc. Zool. Soc. Lond., 7, "1839," p. 154, March, 1840—Assam.

**Milvus lineatus** (J. E. Gray). Black-eared Kite.

*Haliaeetus lineatus* GRAY in Hardwicke, Ill. Ind. Zool., 1, Part 8, pl. 18, Oct., 1831<sup>1</sup>—China.<sup>2</sup>

LADAK: Pandras, Gumber River (alt. 10,600 ft.), ♀ ad., May 25, 1925.

This is a typical specimen of the Black-eared Kite in adult plumage, distinguished from *M. migrans govinda* Sykes, of the Central Provinces, by larger size, paler under parts, and an extensive white patch at the base of the primaries. It is now an established fact that *M. lineatus* is the only kite breeding in Kashmir and Ladak. Whistler (Journ. Bomb. Nat. Hist. Soc., 28, p. 1004, 1922) mentions "*M. melanotis*" as breeding near Rampur and Srinagar, and Osmaston (o. c., 32, p. 142, 1927) calls "*M. migrans lineatus*" the common kite of Kashmir, breeding throughout the main valley and around Srinagar. The same naturalist (Ibis, 1925, p. 707) found it not uncommon around Leh (in May), also saw it in the Indus Valley at Marsalong in June, and met with a pair at the Tso Kar Lake in Rupshu. Meinertzhagen (Ibis, 1927, p. 612) records specimens from Srinagar, Sind Valley, Leh, and other Ladak localities as well as from Skardu, Baltistan. Oberholser (p. 211) lists an adult male, taken by W. L. Abbott in the Valley of Kashmir, on December 4, 1895, as *M. govinda*. but Mr. Riley, who on my request reexamined it, tells me that the bird is unquestionably referable to *M. lineatus*. Certain authors treat the Black-eared Kite as a race of *M. migrans*, but I am rather reluctant to take this course in view of Whistler's observations (Journ. Bomb. Nat. Hist. Soc., 31, p. 479, 1926) in Kulu, where both *M. m. govinda* and *M. lineatus* appear to breed.<sup>3</sup> In Eastern (Chinese) Turkestan, however, *M. lineatus* is obviously the only representative of the genus. According to Scully (p. 126), it is tolerably common in the plains of Kashgaria, where a nest was found near Yarkand, but occurs also in the hills, specimens having been observed near Ali Mazar and even as high as Shahidulla, on the upper Karakash. Sharpe (p. 8), too, refers the kites obtained by the Second Yarkand Mission in Sarikol and Kashgaria to *M. melanotis lineatus*. The various records of "*M. govinda*" from the Tian Shan<sup>4</sup> also doubtless belong to *M. lineatus (melanotis)*, and not to *M. m.*

<sup>1</sup>See Kinnear, Ibis, 1925, p. 489.

<sup>2</sup>"China" is given as locality on the first page of the "Direction for Arranging the Plates."

<sup>3</sup>Whitehead (Ibis, 1909, p. 260), too, lists both *M. govinda* and *M. melanotis* for Kurram.

<sup>4</sup>Lönnerberg (1905, p. 5—Baimgol, Tekes Valley); Smallbones (p. 423—Przewalsk, Bel-Kara-Su); Schalow (1908, p. 106—Birbush); Laubmann (p. 24—Narynsk, Jarkent, Ulato).—Lönnerberg's measurements and remarks on the Baimgol bird are rather significant.



*govinda* which is not known to occur outside of India. According to Menzbier,<sup>1</sup> the Black-eared Kite is found throughout the Tian Shan with the exception of the westernmost ranges (Kara-tau), where it is replaced by *M. m. migrans*. Birds from Ferghana have been separated by Buturlin as *M. melanotis ferghanensis*. The description published in a popular hunting journal in Russian being inaccessible, I am unable to say on what characters it is based, but the name may have to be used for the Himalayan and Turkestan form if it should turn to be different from the typical Chinese bird.

**Phalacrocorax carbo sinensis** (Shaw and Nodder). Cormorant.

*Pelecanus sinensis* SHAW and NODDER, Natur. Misc., 13, pl. 529, 1802—China.

CHINESE TURKESTAN: Maralbashi, Kashgar River, ♂ ad., July 26, 1925.—Wing 340 mm.

Agreeing with specimens from India and China. Ticehurst (Ibis, 1923, p. 459) has pointed out that *sinensis* is the earliest name for the southern form of the Cormorant, its range extending from Holland to China and Japan.

According to Scully (p. 204), the Cormorant is a permanent resident in the plains of Kashgaria. He shot the first specimen on the banks of the Yarkand River, near Tarim Langar, and in the beginning of August found these birds quite common at Tungtask, near Karghalik. The Cormorant breeds also in the Tian Shan, whence it has been recorded by Severtzow (1875, p. 185), Lönnberg (1905, p. 2, s. n. *P. c. medius*; Baimgol), and Schalow (1908, p. 79, Koisara).

**Columba palumbus casiotis** (Bonaparte). Eastern Wood Pigeon.

*Palumbus casiotis* BONAPARTE, Consp. Av., 2, p. 42, 1854—based on *Palumbus torquatus*, variety ex N. W. Himalayas, BLYTH, Cat. Birds Mus. Asiat. Soc., p. 233, 1849; type locality therefore N. W. Himalaya.

CHINESE TURKESTAN, TIAN SHAN: Shatta, Tekes Valley, ♂ ad., ♂ juv., Aug. 26; Agijas, Tekes Valley, ♂ juv., Sept. 3, 1925.

The Eastern Wood-Pigeon is widely diffused in the Tian Shan. Severtzow (1875, p. 180, "*P. pulchricollis*") indicates it as breeding throughout the whole mountain system; Lönnberg (1905, p. 16) records a small series, including a young bird, from Baimgol, a tributary of the Tekes; Laubmann (p. 16) lists a single specimen from the Naryn Valley. It also breeds, as reported by Pleske (1888, p. 45), on the Iskander-kul and other localities in the western

<sup>1</sup>Ornith. Turkestan, 2, Part 2, p. 134, 1889.

spurs of the Tian Shan, while Stolzmann (1897, p. 78) received specimens from the Alai and Ferghana Range. This pigeon is also found in Baluchistan, Afghanistan, and locally in the western Himalayas.

***Columba rupestris turkestanica* Buturlin. Turkestan Hill Pigeon.**

*Columba rupestris pallida* (not *Columba pallida* LATHAM, 1801) ROTHSCHILD and HARTERT, Ornith. Monatsber., 1, p. 41, 1893—Altai Mountains.

*Columba rupestris turkestanica* BUTURLIN, Ornith. Monatsber., 16, p. 45, 1908—new name for *C. rupestris pallida* ROTHSCHILD and HARTERT.

LADAK: Panamik, Nubra, two ♂♂ ad., one ♀ ad., June 11, 12, 1925.

No material from the Altai is available for comparison. The Ladak birds agree with a series from Hill Yarkand and Tian Shan.

This pigeon is reported to be common at elevations of from 10,000 to 16,000 feet throughout Ladak, including the Dras and Suru valleys,<sup>1</sup> but does not cross into Kashmir proper. It is also found in Baltistan, Gilgit, Lahul, Kulu, Spiti, and southern Tibet. Scully (p. 176) met with it in Hill Yarkand in the vicinity of Sanju Pass and near Chuchu Pass, and Richmond (p. 587) records specimens from Little Karakul Lake, Sarikol, and from the mountains north of Kashgar. It is also widely diffused in the Tian Shan and ranges north to the Altai.

***Columba livia neglecta* Hume. Hume's Rock Pigeon.**

*Columba neglecta* HUME, Lahore to Yarkand, p. 272, 1873—"Ladak"; = Wakka River between Paskyum and Shergol, since Hume obviously based his description on the male shot on June 26, 1870 (cfr. Henderson's itinerary on pp. 45-46).

LADAK: Moulbekh (alt. 11,000 ft.), Wakka River, two ♂♂ ad., one ♀ ad., May 29; Lamayuru (alt. 11,500 ft.), two ♂♂ ad., May 30, 1925.

All of these specimens (those from Moulbekh are topotypes) have a distinct rump band, decidedly paler and more whitish than the gray of the mantle. The series is markedly lighter in coloration than *C. l. intermedia* from tropical India. Meinertzhagen (Ibis, 1927, p. 617) states that specimens from Kashmir and Baltistan, of which he collected large numbers, are likewise referable to *C. l. neglecta*, which extends west through Afghanistan and Baluchistan to eastern Persia.

No Rock Pigeon occurs in the plains of the Tarim basin,<sup>2</sup> but it

<sup>1</sup>See Osmaston, Journ. Bomb. Nat. Hist. Soc., 32, p. 144, 1927.

<sup>2</sup>Hartert (Vög. Pal. Fauna, 2, p. 1470, 1920) mentions intergrades between *neglecta* and *intermedia* from "Kashgar," but this must be either a pen slip or an erroneous locality.

reappears in the Tian Shan and Turkestan. Birds from this region have been named *C. l. korejewi* by Sarudny and Loudon<sup>1</sup> on account of their larger size, and the measurements given by these authors certainly exceed those of Ladak birds, whose wings (males) range from 228-235 (against 239-247 mm., in *korejewi*).

***Streptopelia turtur arenicola* (Hartert).** Persian Turtle Dove.

*Turtur turtur arenicola* HARTERT, Nov. Zool., 1, p. 42, 1894—Fao, Persian Gulf.

CHINESE TURKESTAN: Alager, Yarkand River, ♂ ad., July 21; Shamal, two ♂♂ ad., two ♀♀ ad., July 22, 1925.

Turkestan birds are perhaps not quite so pale as those from Persia, but the variation is insignificant.

This pale race of the Turtle Dove is a seasonal visitant to the plains of Eastern Turkestan. According to Scully (p. 177), it is not rare around Yarkand, arriving in May and migrating south towards the end of September or early in October. Henderson (p. 278) obtained it at Oi Tograk, south of Karghalik, and the Second Yarkand Mission (see Sharpe, p. 118) at Kashgar, Yarkand, and Karghalik. It is also sparingly found in the valleys of the Tian Shan.

Besides, it is widely distributed in Russian Turkestan and neighboring countries.

***Streptopelia orientalis meena* (Sykes).** North Indian Rufous Turtle Dove.

*Columba meena* SYKES, Proc. Comm. Sci. Corresp. Zool. Soc. Lond., 2, p. 149, Nov., 1832—Dukhun; part, descr. of male.

KASHMIR: Baltal (alt. 9,400 ft.), ♂ ad., May 23, 1925.

CHINESE TURKESTAN, TIAN SHAN: Shatta, Tekes Valley, two ♀♀ ad., Aug. 25, 27; Agijas, Tekes Valley, ♀ ad., Sept. 3, 1925.

Birds from Kashmir and Tian Shan are apparently identical. In addition to our own material, I have compared the series in the collection of the Tring Museum.

The North Indian Rufous Turtle Dove inhabits the western Himalayas, Afghanistan, and Turkestan, ranging north to the Altai.

While common in Kashmir, Baltistan and Ladak, it seems to be rather rare in the plains of the Tarim basin. Sharpe (p. 119) records specimens collected by the Second Yarkand Mission at Yarkand and south of Ighiz Yar in May, 1874, under the name of *Turtur pulchratus*. In the Tian Shan, it is more numerous again. Severtzow

<sup>1</sup>Ornith. Monatsber., 14, p. 134, 1906.

(1875, p. 180, *C. gelastes*) lists it as generally distributed in all of his four faunal districts; Pleske (1888, p. 46, *Turtur ferrago*) reports it from Chinaz, Samarkand, and the Chatkal-tau; Lönnberg (1905, p. 15) from Baimgol; Smallbones (p. 424) from Ilysky and the Karakol Valley; Schalow (1908, p. 94) from Kashka-su, near Przewalsk; and Laubmann (p. 17) from the Naryn Valley.

***Streptopelia senegalensis ermanni* (Bonaparte).** Persian Little Brown Dove.

*Turtur ermanni* BONAPARTE, Compt. Rend. Ac. Sci. Paris, 43, p. 942, 1856—Bokhara.

CHINESE TURKESTAN: Karghalik, ♂ ad., July 9; Kashgar, Kashgar River, two ♂♂ ad., two ♀♀ ad., one ♀ imm., Oct. 5, 6, 9, 1925.

This is not a very strongly marked race, but on comparison with specimens from tropical India those from Turkestan are found to be on average paler and somewhat larger (wing of males 137-143 mm.). Birds from Vyernyi in the Munich Museum are similar to ours.

The range of this dove can only approximately be indicated at present. Eversmann discovered it in Bokhara, and it has since been traced to breed throughout a large section of Turkestan. Severtzow (1875, p. 180, *Streptopelia aegyptiaca*) lists it for the western and central Tian Shan, stating that in the north it does not extend beyond Aulie-ata; Pleske (1888, p. 46, *Turtur cambayensis*) records it from Chinaz; Schalow (1908, p. 94, *T. senegalensis cambayensis*) from Kashka-su, near Przewalsk; Laubmann (p. 17) from Vyernyi. Stolzmann (1897, p. 78, *Peristera cambayensis*) received numerous examples from Kokand and Marghelan, and Carruthers (Ibis, 1910, p. 471, *T. cambayensis*) found it common near Samarkand. Sharpe (p. 118) records a single bird from Chakmak, n. w. of Kashgar, on the southern slope of the Terek-tau. No records, apparently, exist for the eastern Tian Shan.

According to Ticehurst (Ibis, 1922, p. 466; Journ. Bomb. Nat. Hist. Soc., 32, p. 73, 1927), breeding birds from Sind, lower Punjab, Kandahar, and Baluchistan are undoubtedly referable to *S. s. cambayensis*, and it would thus appear to be rather uncertain whether *S. s. ermanni* breeds anywhere outside of Turkestan.

***Streptopelia decaocto stoliczkae* (Hume).** Turkestan Ring Dove.

*Turtur stoliczkae* HUME, Stray Feathers, 2, p. 519, 1874—Kashgar; Sharpe, Sci. Res. Sec. Yarkand Miss., Aves, p. 177, pl. 14.

CHINESE TURKESTAN: Echitgo (Carshamba Bazar), Yarkand River, two ♂♂ ad., one ♀ ad., July 16; Kashgar, Kashgar River, ♂ ad., Oct. 5, 1925.

Additional specimens.—British Museum: Sanju, one (unsexed) adult, Nov. 1, 1873. F. Stoliczka; Yarkand, ♂ ad., March 12, 1875. J. Scully; Cherchen Darya, ♀ ad., April, N. M. Przewalski.—U. S. National Museum: Uchturfan, ♂ ad., ♀ imm., Nov. 11, 1893. W. L. Abbott.

I agree with Sharpe (p. 117) and Richmond (p. 588) that the Ring Dove of the Tarim basin should be recognized subspecifically. On comparing the specimens listed above with fifty skins of typical *S. d. decaocto* from Macedonia, Constantinople, and Palestine, I find them to differ by generally paler coloration, longer white tips to the lateral rectrices, and slightly larger size. The white apical portion on the outermost rectrix measures from 50 to 65 mm. in length, being thus considerably more extensive than in European and Indian specimens. One male from Yarkand, however, has no more white in the tail than typical *decaocto*. In Turkestan birds the wing, regardless of sex, ranges from 180 to 186, as against 160-175 in *decaocto*, though a few from Macedonia also have wings of 180 mm. or more. The blackish color at the base of the lateral tail feathers used by Buturlin<sup>1</sup> as a criterion for the Turkestan race is exceedingly variable in extent, and does not seem to afford a reliable character for subspecific differentiation.

*S. decaocto stoliczkae* is hitherto known only from the Tarim basin. Stoliczka discovered it at Kashgar, and afterwards obtained a specimen at Sanju, near the northern base of the Kuenlun, as recorded by Sharpe (p. 117). According to Scully (p. 178), this dove is one of the commonest birds in the plains, being at least three times more numerous than *S. turtur arenicola*. It is a permanent resident and breeds in Yarkand and Kashgar in April and May. Majev, as reported by Menzbier (p. 357, *Streptopelia torquata*), sent skins from Aksu as well as from the neighborhood of Kashgar; while Richmond (p. 588, *Turtur douraca stoliczkae*) lists two from Uchturfan in the Abbott Collection, and Schalow (1901, p. 410, *T. risorius*) one from Kashgar, remarking on its pale coloration. The British Museum has an adult female secured by N. M. Przewalski on the Cherchen Darya.

Whether this dove ranges into Russian Turkestan, cannot be ascertained owing to lack of material; but it certainly does not cross the mountains south of the Tarim basin, for specimens in the British Museum from Kashmir and Nepal are unquestionably referable to typical *decaocto*.

<sup>1</sup>See Boetticher, Anz. Orn. Ges. Bay., No. 12, p. 134, 1928.

**Ibidorhyncha struthersii** Vigors. Ibis-bill.

*Ibidorhyncha struthersii* VIGORS, Proc. Comm. Sci. Corresp. Zool. Soc. Lond., 1, "1831," p. 174, pub. March, 1832—Himalayan Mountains.

KASHMIR: Kangan, Sind Valley, ♀ ad., May 20, 1925.

The Ibis-bill frequents mountain streams and breeds with preference on sandy islands in the river-beds. According to Osmaston (Ibis, 1925, p. 713; Journ. Bomb. Nat. Hist. Soc., 32, p. 148, 1927), it is not rare on the Sind and Lidar rivers, Kashmir, from 7,000 to 8,000 ft., and again on the Ladak side of the Great Himalayan Range in the Suru Valley at elevations of from 9,000 to 12,000 feet. Ludlow (Journ. Bomb. Nat. Hist. Soc., 27, p. 146, 1920) met with it on the Maroo River just below Inshin in the Wardwan Valley, Ladak. It has also been found breeding in Kulu, Lahul, Garhwal, southern Tibet, China, and Turkestan.

**Capella solitaria** (Hodgson). Solitary Snipe.

*Gallinago solitaria* HODGSON, Gleanings in Science, 3, p. 238, 1831—Nepal.

CHINESE TURKESTAN, TIAN SHAN: Mointa, Tekes Valley, ♂ ad., Sept. 7; Agijas, Tekes Valley, ♀ ad., Sept. 5, 1925.

Variously recorded from the central and northern Tian Shan by Severtzow (1875, p. 181, *Telmatias hyemalis*), Rothschild (p. 162), Smallbones (p. 427), Schalow (1908, p. 89), Gyldenstolpe (1911, p. 25), and Laubmann (p. 13).

Characters and range of this Snipe are fully discussed by Mrs. Meinertzhagen (Ibis, 1926, pp. 498-500).

**Gallinula chloropus chloropus** (Linnaeus). Moorhen.

*Fulica chloropus* LINNAEUS, Syst. Nat., 10th ed., 1, p. 152, 1758—Europe, restricted type locality England.

CHINESE TURKESTAN: Maralbashi, Kashgar River, four ♂♂, one ♀ ad., one ♂ juv., five ♀♀ juv., July 25-28, 1925.—Wing of adults (male) 171, 172, 177, 178, (female) 162 mm.

Not different from a good series of European, including some English specimens, although none attaining their maximum measurement.

The Moorhen was found by Scully (p. 192) to be tolerably common in the plains of Eastern Turkestan, where it breeds. He obtained adults and young at Yarkand and Tungtash. It also nests in suitable localities in the Tian Shan.

**Fulica atra atra** Linnaeus. Coot.

*Fulica atra* LINNAEUS, Syst. Nat., 10th ed., 1, p. 152, 1758—Europe, restricted type locality Sweden.

CHINESE TURKESTAN: Maralbashi, Kashgar River, three ♂♂ ad., one ♀ ad., two ♀♀ imm., July 25-28, 1925.

The Coot is, as we are told by Scully (p. 191), exceedingly common in the plains of Kashgaria from March to October. It is found on all lakes and "jheels," and breeds from May to July. The Second Yarkand Mission (Sharpe, p. 145) obtained a specimen south of Sanju Pass late in October, no doubt on its southward migration. The Coot breeds also in the Tian Shan.

**Lyrurus tetrix mongolicus** (Lönnerberg). Tian Shan Blackcock.

*Tetrao tetrix mongolicus* LÖNNBERG, Ornith. Monatsber., 12, p. 108, 1904—"Mongolei südlich von der Stadt Urga . . . bei Baimgol . . . und bei Chantingrä [sic]"<sup>1</sup> errore; the type locality is the River Baimgol, a tributary of the Tekes, Tian Shan (see Lönnerberg, Ark. Zool., 2, No. 9, pp. 10-11, 1905).

CHINESE TURKESTAN, TIAN SHAN: Mointa, Tekes Valley, ♂ ad., Sept. 7, 1925.

This bird, a topotype of *L. t. mongolicus*, corresponds in every respect to the original description, and differs from *L. t. viridanus*, of western Siberia, by decidedly purplish blue (instead of steel blue) gloss on the head and rump and darker brown coloration of the tibial feathering. A series from the vicinity of the Issik-kul and a single male from the Kunges Ala-tau, above Vyernyi, in the Munich Museum are identical.

This well-marked race of the Blackcock is restricted to the coniferous forests of the central Tian Shan,<sup>2</sup> extending northward, according to Sushkin,<sup>3</sup> to the western Altai (Tarbagatai). Severtzow (1875, p. 181) records it from the northeastern district (Ak-sai north to Vyernyi and Kopal); Schalow (1908, p. 97) from the vicinity of the Issik-kul; Smallbones (p. 425, *T. tetrix viridanus*) from Przewalsk, Ortök, and Türgen; Laubmann (p. 21) from the Kunges Ala-tau (above Vyernyi) and Dagit Pass.

<sup>1</sup> = Chantengri, the yet unclimbed highest peak of the Tian Shan.

<sup>2</sup> Hartert's misgivings (Vög. Pal. Fauna, 3, p. 1877, 1921) as to the inclusion of Transbaicalia and northern Mongolia in the range of *L. t. mongolicus* are only too well founded. Hartert was misled by Lönnerberg's original type locality, and obviously overlooked the describer's later note in which it was shown to be Tian Shan.

<sup>3</sup> List and Distribution of Birds of the Russian Altai, etc., pp. 18-19, 1925.

**Tetraogallus himalayensis himalayensis** Gray. Himalayan Snow-cock.

*Tetraogallus himalayensis* GRAY, Proc. Zool. Soc. Lond., 10, "1842," p. 105, pub. January, 1843—Himalaya Mountains; Hills north of Simla suggested as type locality by Meinertzhagen (Ibis, 1927, p. 629).

CHINESE TURKESTAN, TIAN SHAN: Mointa River, Tekes Valley (♂) ad., Sept. 7, 1925.

After comparing large series from the Tian Shan and western Himalayas, I find myself in agreement with Bianchi and Hartert that the slight variation of the Turkestan birds is too inconstant to justify their separation.

The Himalayan Snow-cock inhabits the western Himalayas from the Afghan frontier east to Garhwal, and ranges north through the Pamirs<sup>1</sup> to the Tian Shan, Dsungarian Ala-tau, and Tarbagatai. In the Tian Shan it is generally distributed at high elevations from the Chatkal-tau east to the vicinity of Hami.

In the western Kuenlun, from Tochtachon eastward, it is replaced by a paler form with the chestnut stripes on the hind neck not joining one another in the middle. This has been named *T. h. grombczewskii* by Bianchi.

**Alectoris graeca chukar** (J. E. Gray). Chukar Partridge.

*Perdix Chukar* J. E. GRAY in Hardwicke, Ill. Ind. Zool., 1, Part 2, pl. 54, pub., March, 1830<sup>2</sup>—India; type locality Srinagar, Kumaon.<sup>3</sup>

LADAK: Pandras (alt. 10,600 ft.), Gumber River, ♂ ad., May 25, 1925.

This bird as well as others from Dras in Col. Meinertzhagen's collection are precisely similar to specimens from Kashmir (Srinagar; Kangan; Woolar Lake; Traal) which, in their turn, cannot be distinguished from a large series of typical *chukar*, comprising skins from Nepal (two), Kumaon (Bhagirati Valley, one), Simla Hills (many), Kulu (four), and Rohtang (one). Certain specimens from central Kashmir are perhaps slightly darker above than the general run from more eastern localities, but the majority cannot be separated. Birds from the vicinity of Dras are, as pointed out by Meinertzhagen (Ibis, 1927, p. 630), typical *chukar*, which is thus

<sup>1</sup>An adult male from the Tagdumbash Pamir examined in the U. S. National Museum.

<sup>2</sup>See Kinnear, Ibis, 1925, p. 489.

<sup>3</sup>Latham (Gen. Hist. Birds, 8, pp. 295-296, 1823), who had access to Hardwicke's drawings and manuscript notes, states that the Chukar Partridge is a "native of the Mountains of Srinagar and other parts of India, also at Futtehguhr," and as we know that Hardwicke made an expedition to Srinagar in Kumaon (see Kinnear, Ibis, 1925, p. 486), we may accept this place as the type locality.



seen to filter into extreme western Ladak. Farther east, around Kargil and in the Wakka Valley, it gradually passes into *A. g. pallescens*, the form found east of the Namika La and ranging throughout eastern and northern Ladak.

***Alectoris graeca pallescens* (Hume).** Northern Chukar Partridge.

*Caccabis pallescens* HUME in Henderson and Hume, Lahore to Yarkand, p. 283, 1873—"Karbu, Ladak" = Bod Kharbu (type in British Museum examined).

LADAK: Lamayuru (alt. 11,500 ft.), ♂ ad., May 30; Khalsar (alt. 11,000 ft.), Nubra, ♂ ad., June 9; Taghar (alt. 10,300 ft.), Nubra, two ♂ ad., June 9; Panamik, Nubra, ♂ ad., ♀ ad., June 12, 1925.

Additional specimens.—U. S. National Museum: Rondu (alt. 6,000 ft.), Baltistan, ♂ ad., Feb. 4, 1892. W. L. Abbott; Leh (alt. 11,000 ft.), Ladak, ♂ ad., July 1, 1893; above Tikse (alt. 14,000 ft.), near Leh, Ladak, ♀ ad., Aug. 20, 1893. W. L. Abbott.—British Museum: Bod Kharbu, Ladak, ♂ ad., June 26, 1870. George Henderson (type of *C. pallescens*); Lamayuru, Ladak, adult, Aug. 23, 1873. F. Stoliczka; Leh, Ladak, adult, Sept. 4, 1873. F. Stoliczka; Nubra Valley, ♂ ad., June 26, 1874. J. Biddulph; Gilgit (alt. 5,000 ft.), ♂ ad., Aug., 1876. J. Biddulph; Boonji (alt. 5,000 ft.), s. e. of Gilgit, ♀ ad., Jan. 19, 1879. J. Biddulph; Bas Robat, the Pamir [= Wakhan Valley, Little Pamir], ♂ ad., May 12, 1874. J. Biddulph; Ak Mujid [Pamir], ♀ ad., June 2, 1874. J. Biddulph.—Munich Museum: Tankse, Ladak, ♂ ad., Sept. 25, 1906;<sup>1</sup> Chemdeh, Ladak, ♂ imm., Sept. 28, 1906.<sup>1</sup> E. Zugmayer.

In fresh fall plumage, this form may be distinguished from *A. g. chukar* by decidedly paler dorsal surface, the back being grayish drab (instead of nearly sepia brown) with the anterior portion light cinnamon drab rather than brownish drab, while the rump and tail coverts are more grayish, less tinged with olivaceous (deep olive gray instead of deep grayish olive).

The racial characters are even more pronounced in worn breeding examples, when compared with *chukar* in corresponding plumage.

The type of *C. pallescens*, taken at Bod Kharbu on June 26, agrees in every particular with one of the males from Taghar, Nubra (June 9), and summer specimens from Gilgit and the Pamir are exactly like those from the Indus and Nubra valleys. The two only examples in good plumage, an adult female from Boonji, Gilgit (January) and a male from Rondu, Baltistan (February), are not distinguishable from an adult from Tankse, Ladak (September 25), so far as I can see. In coloration of upper parts they are just intermediate between *chukar* and *pallida*, being paler and more olivaceous than *chukar*, but darker and less rufescent than *pallida*. While cer-

<sup>1</sup>*Caccabis saxatilis pallescens* PARROT, p. 243, Nos. 896, 909.

tain examples of *pallescens*, taken late in July or August, closely resemble the latter, yet comparison of a series tends to show that the two forms are not the same and should be kept separate.

The range of *A. g. pallescens* appears to be rather restricted. It stretches from the southern Pamir (Ak Mujid; Bas Robat, Wakhan)<sup>1</sup> through Gilgit and Baltistan to Ladak as far east as Tankse, north to the Shyok and Nubra valleys, but does not include the extreme west beyond the Namika La, this section of Ladak being tenanted by *A. g. chukar*.

### *Alectoris graeca pallida* (Hume). Pale Chukar Partridge.

*Caccabis pallidus* HUME in Henderson and Hume, Lahore to Yarkand, p. 284, 1873—"Yarkand" = Karakash River, Hill Yarkand (type in British Museum examined).

CHINESE TURKESTAN: Tam Karaul (alt. 10,000 ft.), Sanju River, Hill Yarkand, three ♀♀ ad., July 3; Kisi Bulok, South Musart River, south foot of Tian Shan, two ♀♀ ad., Aug. 13, two ♂♂ ad., two ♀♀ ad., Sept. 16; Shurbulak Pass (west of Kashgar), ♂ ad., Nov. 2, 1925.

Additional specimens.—British Museum: Karakash, Hill Yarkand, ♀ ad., Aug. 7, 1870. Geo. Henderson (type of *C. pallidus*); Kiwaz, Sanju River, adult, Oct. 26, 1873. Col. Gordon; Chahil Gombaz, Sarikol, adult, March 25, 1874. F. Stoliczka; "Yarkand," ♂ ad., March 13, 1875. J. Scully; "Yarkand," adult (in fresh fall plumage), no date, J. Biddulph.—Coll. Meinertzhagen: "Maralbashi," ♂ ad., May 25, 1908 (authentic specimen of *A. c. fallax* SUSHKIN, received from the describer).—Munich Museum: Polu, Keriya Range, ♂ ad., June 15, 1906. E. Zugmayer.<sup>2</sup>

Although not admitted by Hartert,<sup>3</sup> the Chukar Partridge inhabiting the hills of Eastern Turkestan obviously deserves recognition. Compared with *A. g. pallescens* in corresponding plumage, breeding birds from Hill Yarkand are above conspicuously paler, more sandy, with the rump and tail coverts decidedly olivaceous (less grayish), while the black bars on the flanks are rather narrower. The three specimens from Tam Karaul in our collection agree perfectly with the type and Zugmayer's bird from Polu. Examples in fresh fall plumage also differ from *pallescens* in being much paler above, more sandy (less grayish), and in lacking the grayish uropygial area. The rump and upper tail coverts are sandy drab, of the same

<sup>1</sup>As correctly stated by Sharpe (p. 121), the bird from Jungalik, Sarikol, April 27, 1874, obtained by F. Stoliczka of the Second Yarkand Mission is not *pallidus*. On careful examination it proves to be a typical specimen of *A. g. pallescens*, agreeing particularly well with one of our males from Taghar, Nubra. It may have been a straggler.

<sup>2</sup>*Caccabis saxatilis pallescens* PARROT, p. 243, No. 400.

<sup>3</sup>Nov. Zool., 24, p. 280, 1917; Vög. Pal. Fauna, 3, p. 1908, 1921.

color but lighter than the mantle, whereas in *A. g. pallescens* they are deep olive gray, conspicuously contrasted with the color of the upper back.

A single adult from Chahil Gombaz, Sarikol, and two from "Yarkand" belong likewise to *A. g. pallida*, while the bird from Shurbulak Pass (west of Kashgar) is just a slight shade darker, not quite so sandy above.

The late P. P. Sushkin<sup>1</sup> referred the Chukar Partridges found along the southern slopes of the Tian Shan from the Kuruk-tagh west to Uchturfan to a new form, *A. chukar fallax*.<sup>2</sup> Our series from Kisil Bulok is thus representative of this race. While admitting that the September birds (in freshly molted plumage), by slightly darker upper parts, exhibit a certain tendency in the direction of the still darker *A. g. falki* Hartert (of the central Tian Shan), the variation appears to me too insignificant to warrant the recognition of another local form. Moreover, the two females in worn plumage (August) are indistinguishable from those taken at Tam Karaul, near the type locality of *C. pallidus*.

For the present I am, therefore, inclined to unite the Chukar Partridges of Eastern Turkestan in a single form under Hume's name *pallida*.

*A. g. pallida*, according to Scully (p. 182), is abundant in all the hills which surround the plains of the Tarim basin on the north, west, and south. In winter the birds seem to come down to lower elevations than they frequent in summer; numbers of partridges are then caught and brought into Yarkand and Kashgar for sale. The specimens labeled "Yarkand" and "Maralbashi" in the collections of the British Museum and Col. Meinertzhagen are no doubt of this origin.

In the southern hills, Henderson found it on the Karakash, while the Second Yarkand Mission (Sharpe, p. 121) obtained specimens at Kiwaz, Sanju River, and south of Kugiar. Zugmayer met with it at Polu, Keriya Range, and, according to Sushkin, its range stretches throughout the Altyn-tagh east to the Humboldt Range. In the western mountains, the Second Yarkand Mission secured a specimen at Chahil Gombaz, Sarikol, and farther north at Chakmak,

<sup>1</sup>Bull. Brit. Orn. Cl., 48, p. 23, 1927—Kuruk-tagh, east of Bagrash-kul.

<sup>2</sup>Sushkin compares it merely with *A. g. falki*, and does not state how it differs from *A. g. pallida*. His remarks on the characters of the latter form (op. cit., p. 24) are particularly applicable to the worn plumage. Needless to say, I cannot agree with Sushkin in separating *A. chukar* and allies specifically from *A. graeca*.

in the southern foothills of the Tian Shan. In the same district, George K. Cherrie shot one on the Shurbulak Pass, west of Kashgar. Thence this Partridge ranges along the south slope of the mountains as far as the Kuruk-tagh, east of the Bagrash-kul.

**Alectoris graeca falki** Hartert. Falk's Chukar Partridge.

*Alectoris graeca falki* HARTERT, Nov. Zool., 24, p. 280, 1917—near Przewalsk, east of Issik-kul, Tian Shan (type in Tring Museum examined).

CHINESE TURKESTAN, TIAN SHAN: Agijas, Tekes Valley, one ♂ juv., two ♀ juv., Sept. 3; Shatta, Tekes Valley, two ♂ juv., one ♀ juv., Aug. 26, Sept. 13, 1925.

Some of these specimens are in sufficiently advanced plumage to show that they are referable to *A. g. falki*, of which a large series (of nearly forty skins) has been examined from Narynsk and the Issik-kul region.

This form may be distinguished from *A. g. pallida* by its darker, anteriorly less reddish upper parts and deeper gray breast.

Its range comprises the greater part of the central and western Tian Shan, and stretches west into Buchara and Transcaspia.

**Phasianus colchicus shawii** Elliot. Shaw's Pheasant.

*Phasianus shawii* ELLIOT, Proc. Zool. Soc. Lond., 1870, p. 403—Yarkand.

CHINESE TURKESTAN: Kashgar, Kashgar River, ♂ ad., Oct. 14; Conishar (six miles n. e. of Aksu), ♀ juv., Aug. 8, 1925.

The adult male is a typical example of *shawii*, with grayish white upper wing coverts, chestnut rump and tail coverts, and without trace of a white neck band, and agrees with specimens from Yarkand in the British Museum. There is the usual amount of variation in the extent of the green edges to the pectoral feathers as well as in the metallic gloss on the head and neck, but as has been demonstrated by Scully (Stray Feathers, 3, pp. 433-436, 1875), this is purely individual, and Elliot was doubtless mistaken in attributing the slight differences to the existence of two species, *P. shawii* and *P. insignis*, around Yarkand. Birds from Maralbashi, described by Lorenz<sup>1</sup> as *P. shawi chrysomeloides*, appear to me inseparable from those taken near Yarkand and Kashgar.

This pheasant is restricted to the plains of western Chinese Turkestan, and evidently does not range much beyond the Aksu

<sup>1</sup>Ornith. Monatsber., 17, p. 171, 1909—"Maral-Basch," Kashgar Darya.

River and Khotan Darya in the east.<sup>1</sup> According to Scully (p. 179), it is common among long grass jungle and reeds growing in waste ground between Yarkand and Kashgar. Biddulph (in Sharpe, p. 120) met with it in the same district and on the road from Kashgar to Maralbashi, and states that it occurs as far north as Aksu, but is not found west of the Sanju-Kashgar road. Richmond (p. 588) records specimens taken by W. L. Abbott at the junction of the Aksu and Kashgar rivers, at Kokchall (east of Maralbashi), and in the jungles on the Kashgar River, 100 miles below Maralbashi; and Seebohm (Proc. Zool. Soc. Lond., 1888, p. 415) tells us that Gen. Przewalski obtained examples of *P. c. shawi* in the valleys of the Aksu River and Khotan Darya near their confluence with the middle stream of the Tarim.

Farther east in the Tarim basin, from Karashar on the Bagrashkul south to Lob Nor and the lower Cherchen Darya, this Pheasant is represented by *P. c. tarimensis* Pleske, easily recognizable by yellowish (buffy) brown upper wing coverts, lighter mantle, and by having the lower back and rump barred with green and buff.

Separated from both of these races by the snow-clad Chalyk-tau, we find in the Tekes and Kunges valleys another form, *P. c. mongolicus*, recognizable among other features by possessing a distinct white band around the neck. Of this, the expedition secured two ♂♂ juv. and two ♀♀ in the Tekes Valley, at the mouth of the Mointa River, on September 10th, 1925.

#### REFERENCES

- G. Babault. Mission Guy Babault dans les Provinces centrales de l'Inde, dans la Région Occidentale de l'Himalaya et Ceylan, 1914. Résultats Scientifiques. Oiseaux collectionnés au cours de la Mission. Paris. 1920.—Quoted as "Babault."
- R. S. P. Bates. Notes on Hugh Whistler's "A Contribution to the Ornithology of Cashmere"; Journ. Bombay Nat. Hist. Soc., 26, Part 3, pp. 798-802, Dec. 31, 1923.
- V. Bianchi. Zur Ornithologie der westlichen Ausläufer des Pamir und des Alai; Bull. Acad. Sci. St. Pétersb., 31, pp. 337-396, Dec. 10, 1886.—Quoted as "Bianchi."
- N. Gyldenstolpe. Short Notes on a Collection of Birds from Russian Turkestan; Arkiv för Zoologi, Stockholm, 7, No. 14, pp. 1-26, June 30, 1911.—Quoted as "Gyldenstolpe."

<sup>1</sup>Laubmann's record of *P. c. shawi* (p. 19) from the south base of the Tian Shan (presumably between Kucha and Karashar) apparently refers to *P. c. tarimensis*, as may be inferred from the description of the lower back and rump as "gelblichgraugrün."

142 FIELD MUSEUM OF NATURAL HISTORY—ZOOLOGY, VOL. XVII

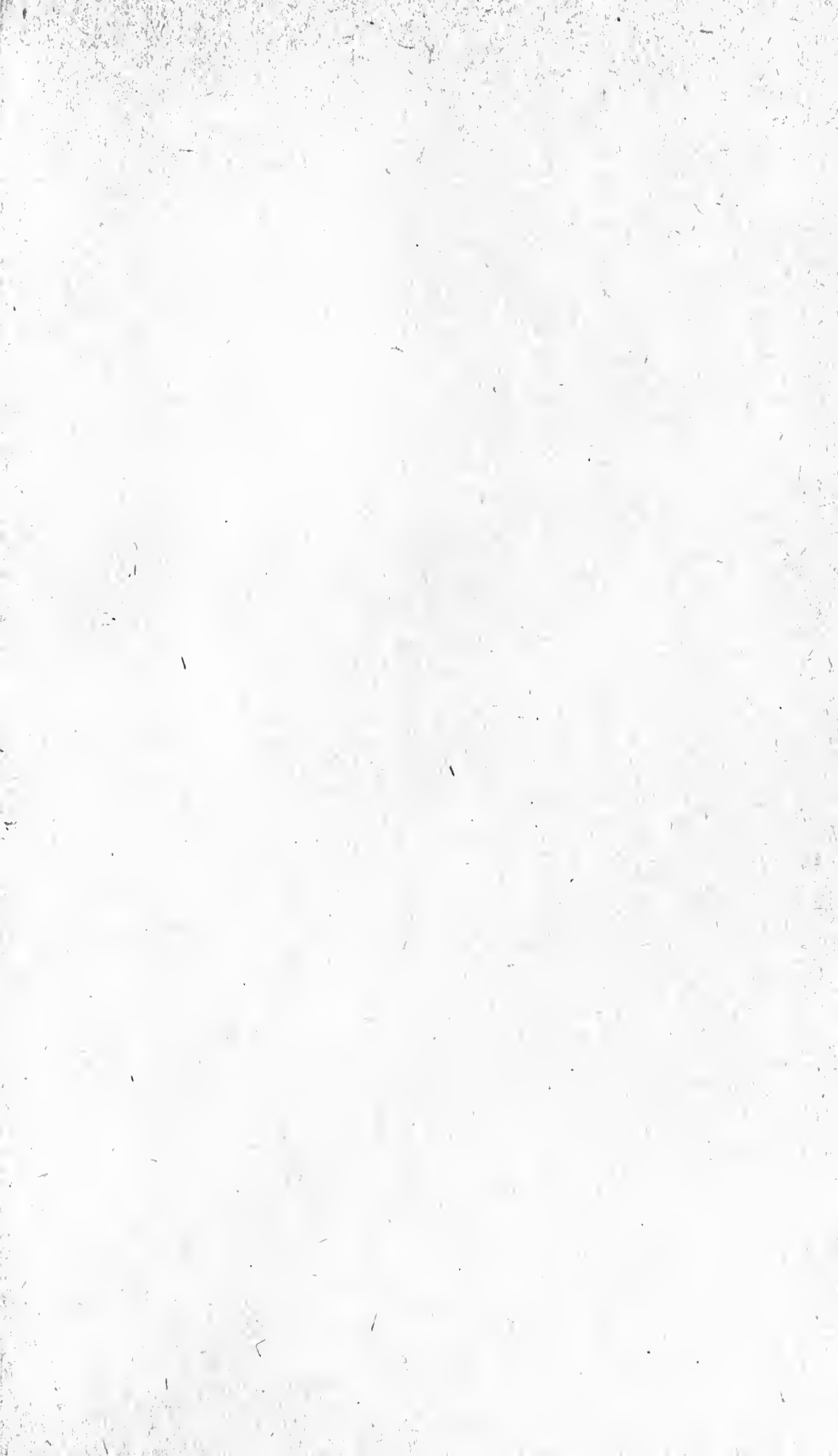
- G. Henderson* and *A. O. Hume*. Lahore to Yarkand. Incidents of the Route and Natural History of the Countries Traversed by the Expedition of 1870 under T. D. Forsyth. London. 1873.—Quoted as "Henderson" or "Hume."
- R. W. G. Hingston*. Bird Notes from the Mount Everest Expedition of 1924; Journ. Bombay Nat. Hist. Soc., 32, No. 2, pp. 320-329, Oct. 20, 1927.
- N. B. Kinnear*. On the Birds collected by Mr. A. F. R. Wollaston during the First Mount Everest Expedition. With Notes by A. F. R. Wollaston; Ibis, (11), 4, pp. 495-526, pl. 7, July, 1922.
- P. Kollibay*. Bemerkungen über einige turkestanische Vögel; Journ. Ornith., 64, pp. 582-604, 1916; 65, pp. 444-458, 1917.—Quoted as "Kollibay, 1916" and "1917."
- A. Laubmann*. Wissenschaftliche Ergebnisse der Reise von Prof. Dr. G. Merzbacher im zentralen and östlichen Tian-Schan 1907-8. I. Vögel; Abhandl. Bayr. Akad. Wiss., Math.-phys. Kl., 26, No. 3, pp. 1-105, 1913.—Quoted as "Laubmann."
- E. Lönnberg*. Short Notes on a Collection of Birds from Tian Shan; Arkiv för Zoologi, Stockholm, 2, No. 9, pp. 1-23, pl. 1, March 23, 1905.—Quoted as "Lönnberg."
- F. Ludlow*. Notes on the Nidification of Certain Birds in Ladak; Journ. Bombay Nat. Hist. Soc., 37, Part 1, pp. 141-146, July 1, 1920.
- R. Meinertzhagen*. Systematic Results of Birds Collected at high altitudes in Ladak and Sikkim; Ibis, (12), 3, pp. 363-422, pl. 11, 12, July 1, 1927; pp. 571-633, pl. 15, Oct. 14, 1927.
- M. Menzbier*. On the Birds of the Upper Tarim, Kashgaria; Ibis, (5), 3, pp. 352-358, 1885.—Quoted as "Menzbier."
- H. C. Oberholser*. Notes on Birds collected by Dr. W. L. Abbott in Central Asia; Proc. U. S. Nat. Mus., 22, pp. 205-228, 1900.—Quoted as "Oberholser."
- B. B. Osmaston*. The Birds of Ladakh; Ibis, (12), 1, pp. 663-719, pl. 24, July 8, 1925.
- B. B. Osmaston*. Notes on the Birds of Kashmir; Journ. Bombay Nat. Hist. Soc., 31, Part 4, pp. 975-999, Feb. 20, 1927; 32, Part 1, pp. 134-153, Aug. 1, 1927.
- E. Oustalet*. Catalogue des Oiseaux provenant du Voyage de M. Bonvalot et du prince Henri d'Orléans à travers le Turkestan, le Tibet et la Chine occidentale; Nouv. Arch. Mus. d'Hist. Nat. Paris, trois. série, 5, pp. 115-120, 1893; 6, pp. 1-120, pl. 3-5, 1894.—Quoted as "Oustalet, 1893" or "1894."
- C. Parrot*. Bericht über eine von Dr. E. Zugmayer in Chinesisch-Turkestan, Westtibet und Kaschmir zusammengebrachte Vogelsammlung; Verhandl. Ornith. Ges. in Bayern, 6, "1908," pp. 228-266, Nov. 26, 1909.—Quoted as "Parrot."
- T. Pleske*. Revision der Turkestanischen Ornith. Nach Sammlungen des verstorbenen Conservators Valerian Russow; Mém. Acad. Sci. St. Pétersb., (7), 36, No. 3, pp. 1-58, June, 1888.—Quoted as "Pleske, 1888."
- T. Pleske*. Die ornithologische Ausbeute der Expedition der Gebrüder G. und M. Grum-Grzimallo nach Central-Asien (1888-90); Bull. Acad. Sci. St. Pétersb., nouv. sér., 3, [=35], No. 1, pp. 113-147 [=Mél. Biol., 13, pp. 273-307], Sept. 28, 1892.—Quoted as "Pleske, 1892."
- T. Pleske* and *V. Bianchi*. Wissenschaftliche Resultate der von N. M. Przewalski nach Central-Asien unternommenen Reisen. Band II. Vögel. Lief. 1, pp. 1-80, 1889; Lief. 2, pp. 81-144, 1890; Lief. 3, pp. 145-192, 1894; Lief. 4 [by V. Bianchi], pp. 193-360, 1905. St. Pétersburg.
- C. W. Richmond*. Catalogue of a Collection of Birds made by Dr. W. L. Abbott in Kashmir, Baltistan and Ladak, with Notes on some of the Species, and a Description of a new Species of Cyanecula; Proc. U. S. Nat. Mus., 18, pp. 451-503, 1896.—Quoted as "Richmond."

- C. W. Richmond.* Catalogue of a Collection of Birds made by Dr. W. L. Abbott in Eastern Turkestan, the Thian-Shan Mountains, and Tagdumbash Pamir, Central Asia, with Notes on some of the Species; Proc. U. S. Nat. Mus., 18, pp. 569-591, 1896.
- W. Rothschild.* List of a Collection of Birds made south of the Issik-kul in Russian Turkestan; Novit. Zool., 9, pp. 161-168, 1902.
- H. Schalow.* Beiträge zur Vogelfauna Centralasiens. Uebersicht der von Herrn Oberamtmann Dr. Holderer während seiner Durchquerung Asiens gesammelten Vögel; Journ. Ornith., 49, pp. 393-456, 1901.—Quoted as "Schalow, 1901."
- H. Schalow.* Beiträge zur Vogelfauna Centralasiens. Uebersicht der von Herrn Dr. Gottfried Merzbacher im centralen Tien-schan gesammelten Vögel; Journ. Ornith., 56, pp. 72-121, 202-260, 1908.—Quoted as "Schalow, 1908."
- J. Scully.* A Contribution to the Ornithology of Eastern Turkestan; Stray Feathers, 4, pp. 41-205, with map, 1876.—Quoted as "Scully."
- N. A. Severtzow.* Allgemeine Uebersicht der aralo-tianschanischen Ornithologie in ihrer horizontalen und vertikalen Verbreitung. Aus dem Russischen von J. von Fischer; Journ. Ornith., 21, pp. 321-389, 1873; 22, pp. 403-447, 1874; 23, pp. 58-104, 168-190; Zusätze und Berichtigungen, pp. 190-200, 1875.—The tabular list and "Zusätze" quoted as "Severtzow, 1875."
- N. A. Severtzow.* On the Birds of the Pamir Range; Ibis, (5), 1, pp. 48-83, 1883.
- N. A. Severtzoff.* Faune des Vertébrés du Turkestan. Les Oiseaux. Traduction du Russe par Léon Olphe Galliard; Zeits. Ges. Ornith., 4, pp. 1-141, 1887.
- R. B. Sharpe.* Scientific Results of the Second Yarkand Mission, based upon the collections of the late Ferdinand Stoliczka. Aves. London. 1891. pp. 153, pl. 24.—Quoted as "Sharpe."
- G. Smallbones.* Ein Beitrag zur Ornithologie des Tianshan; Journ. Ornith., 54, pp. 411-428, 1906.—Quoted as "Smallbones."
- F. Stoliczka.* Ornithological Observations in the Sutlej Valley, N. W. Himalaya; Journ. Asiatic Soc. Bengal, 37, Part 2, pp. 1-70, 1868.
- J. Stolzmann.* Oiseaux de la Ferghana, d'après les recherches faites par Mr. Thomas Bary (1892-1895); Bull. Soc. Imp. Moscou, nouv. série, 11, No. 1, pp. 54-81, 1897.—Quoted as "Stolzmann."
- C. B. Ticehurst.* Critical Notes on Osmaston's The Birds of Ladak; Ibis, (12), 2, pp. 232-234, Jan., 1926.
- C. B. Ticehurst.* The Birds of British Baluchistan; Journ. Bombay Nat. Hist. Soc., 31, Part 3, pp. 687-711, Nov. 1, 1926; 31, Part 4, pp. 862-881, Feb. 20, 1927; 32, Part 1, pp. 64-97, Aug. 1, 1927.
- A. E. Ward.* Birds of the Provinces of Kashmir and Jammu and adjacent districts; Journ. Bombay Nat. Hist. Soc., 17, Part 1, pp. 108-113, Apr. 23, 1906; Part 2, pp. 479-485, Sept. 20, 1906; Part 3, pp. 723-729, Feb. 15, 1907; Part 4, pp. 943-949, June 29, 1907.
- A. E. Ward.* Further Notes on Birds of the Provinces of Kashmir and Jammu and adjacent districts; Journ. Bombay Nat. Hist. Soc., 18, Part 2, pp. 461-464, Apr. 13, 1908.
- M. L. Wathen.* Ornithological Notes from a Trip in Ladak; Journ. Bombay Nat. Hist. Soc., 29, Part 3, pp. 694-702, Dec. 31, 1923.
- H. Whistler.* A Contribution to the Ornithology of Cashmere; Journ. Bombay Nat. Hist. Soc., 28, Part 4, pp. 990-1006, Dec. 20, 1922.
- H. Whistler.* A Note on the Birds of Spiti; Ibis, (11), 5, pp. 611-629, Oct. 3, 1923.

144 FIELD MUSEUM OF NATURAL HISTORY—ZOOLOGY, VOL. XVII

- H. Whistler.* The Birds of Lahul, N. W. Himalaya; *Ibis*, (12), 1, pp. 152-208, Jan. 3, 1925.
- H. Whistler.* The Birds of the Kangra District, Punjab; *Ibis*, (12), 2, pp. 521-581, July 5, 1926.
- H. Whistler.* A Note on the Birds of Kulu; *Journ. Bombay Nat. Hist. Soc.*, 31, Part 2, pp. 458-485, Aug. 15, 1926.
- C. H. T. Whitehead.* On the Birds of Kohat and Kurram, Northern India. With an Introduction by H. A. F. Magrath; *Ibis*, (9), 3, pp. 90-134, 214-284, 620-623, 1909.
- C. H. T. Whitehead.* Letter regarding the Bird-life of the Kaghan Valley; *Ibis*, (9), 3, pp. 713-714, 1909.

















UNIVERSITY OF ILLINOIS-URBANA



3 0112 004115314